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TUBERCULOSIS

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ORIGINAL ARTICLES.

TRAINING COLONIES FOR THE TUBERCULOUS.[1]

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The farm colony, as it was originally called, was a natural evolution of the sanatorium, designed to meet the needs of a class of tuberculous patient for whom something more than sanatorium treatment was found by actual practical experience to be necessary. Its purpose was to serve those tuberculous persons whose disease, after varying periods of treatment at the sanatorium, had been almost completely arrested, but who were found to remain liable to relapse when they returned to their ordinary avocations. At the same time, it was also found that such persons no longer required the more detailed care, guidance, and close individual direction which are the outstanding features of the sanatorium.

The original conception of the "Colony," therefore, was that, while the patient still remained under medical supervision, his daily life should gradually approximate to the conditions of the ordinary working man's daily existence. The life was of the simplest—bed and board, those of the ordinary working man—*i.e.*, good, but nothing needless or extravagant. The number of hours and the kind of work upon which each patient was engaged was regulated from day to day by the medical superintendent. During this period the whole neuro-muscular system,

[1] Portions of an Address on "The Part played by Training Colonies in the Treatment of Tuberculosis," delivered at the Tenth Annual Conference of the National Association for the Prevention of Tuberculosis, July 4, 1924.

poisoned by tuberculous toxins, slowly but steadily recovered strength and tone. In addition, some of the colonists, for whom return to their former occupation would mean certain breakdown and recurrence of their disease, were trained in new pursuits, and for such colonists a *definite and suitable post was found before discharge from the colony*. The last point was regarded as one of paramount importance in the interests of the colonist, and is weil worthy of emphasis in relation to the more recent developments of training colonies, of which I shall speak later.

Finally, the continued treatment and training, provided by the original farm colony, was carried out at a remarkably low cost, amounting, I think, even during the war period, to something like £1 2s. 5d. per head per week. I wish to emphasize the fact that this low cost, compared to the cost of sanatorium treatment, was the *factor* which made it possible in those days for the patient to enjoy the much longer period of treatment and training, thereby enabling him to adjust himself, where necessary, to the new conditions of life with which he was confronted.

I must mention, however, that the careful observation of patients *during their period of sanatorium treatment* was regarded as of great importance in determining their suitability on medical and other grounds for colony life.

Such considerations led to the inclusion of the farm colony in the model tuberculosis scheme adopted and recommended by the Departmental Committee on Tuberculosis (1912-13). The Report of that Committee describes the second unit of the tuberculosis scheme as "consisting of a system of sanatoria, hospitals, farm colonies, open-air schools, etc.," and the Appendix to the Report contains a statement and memoranda on the subject of the colony.

We have travelled a long, long way in the development of the colony idea since the pre-war era.

The Report of the Inter-Departmental Committee, in 1919, stated that they regarded training colonies as extensions of sanatoria, and that their special characteristics were: (*a*) That they were only intended to provide a limited period of training, usually six to twelve months; (*b*) that the colonists were to be subjected to medical control and supervision, and to live there separated from their homes and friends; and (*c*) that the colonies were only intended to form a stage in the treatment of the patient through which they were to pass to ordinary conditions of life, or to more permanent settlements.

Shortly after the publication of this Report the Ministries of Health and Pensions issued their various circulars and memoranda on the subject of vocational training colonies, and the financial arrangements which they were prepared to make in connection with their establishment.

Vocational Training Colonies.

The basic principle of these institutions is to provide twelve months' training in an occupation suitable for a tuberculous male patient, in the expectation that, at the end of that period, the trainee can leave the colony and support himself by his own exertions in the new occupation. The occupations selected as the most suitable by the Ministries concerned were pig and poultry farming, market gardening, rural carpentry, clock and watch repairing, etc.

I suppose we shall all agree that in exceptional cases there are always a certain number of persons in this world who can and will succeed in making a livelihood of some kind in a new occupation, when a change has to be made in middle life. We have all seen this happen now and again in cases of men who, either from bad luck, bad health, bad management, or some other reason, have had to give up the occupation in which they were trained and take to another. But even in an ordinary healthy life this is always a difficult transition, and failure is undoubtedly more frequent than success. If this be true of the healthy man, how much more is it likely to be true of the tuberculous patient with his impaired life, more especially when, as in times of considerable unemployment, he has to compete on equal terms with the healthy industrial operative.

When one adds to this fact the short period of training provided at the colony, as well as the unfortunate fact that, practically speaking, very little attempt has been made by the Ministries or the local authorities concerned to provide an organization, in connection with training colonies, for the specific purpose of finding suitable employment for the trainees before their discharge, you will not be surprised when I express the opinion that anyone with any experience of tuberculosis, any experience of the industrial world, any experience of the economic conditions which have obtained, and still obtain, in this country, would safely predict what has in fact happened—viz., that the more recently established training colony schemes were initiated and carried on in circumstances which constituted, to say the least, a very severe handicap.

To have had any chance of real success the following conditions were essential:

Provision for (*a*) a more prolonged period of treatment and training where necessary; (*b*) a first-rate organization for securing to the trainees a suitable occupation before leaving the colonies; (*c*) an equally first-rate business organization, in certain of the occupations in which they were trained, for marketing their products. Had those essential conditions of success been provided, the outlook to-day might have been very different.

Village Settlements.

The call for the provision of permanent employment and settlement under healthy conditions led the Inter-Departmental Committee to the conclusion that something of the nature of a village settlement on the lines of the Papworth scheme was the most satisfactory solution of the problem of the tuberculous ex-service men. The arguments advanced by the Inter-Departmental Committee in favour of such a scheme were that: (*a*) An ex-service man is assured of good housing and of industrial occupation while he remains in the settlement; (*b*) he has the advantage and comfort of family life; (*c*) there is general medical supervision in the village settlement; (*d*) there are no advanced cases in this section of the scheme, and therefore it would not be regarded as a "leper colony." For these reasons they made it their chief recommendation, and they estimated that the amount of such accommodation required would be for 2,000 to 3,000 ex-service men, and that ten village settlements in various parts of the country, providing in each settlement for 200 to 250 men and their families, were necessary. They also recommended that Parliament should provide funds for this purpose up to £1,000,000.

For all practical purposes Papworth Hall and Preston Hall may be taken as the best examples in this country to-day which fulfil the recommendations of the Inter-Departmental Committee, in so far as they are permanent village settlements.

Let us now try to appraise the part played by the permanent village settlement in the practical solution of the tuberculosis problem. For the sake of simplicity I will ask you to do so mainly from the point of view of its value in relation to the tuberculous inhabitants of our large industrial areas; because, after all, we must bear in mind that 80 per cent. of the population of England and Wales live in urban, and only 20 per cent. in rural, areas.

1. *Finance.*—I am not in a position to give any accurate figures with regard to either the Papworth or the Preston Hall settlements, but it is probably fair to say that the capital expenditure involved in each case is not less than £250,000. Apart, therefore, from the heavy annual cost of maintenance, it is difficult to see how the erection of a number of such settlements by local authorities could be justified as a practical proposition.

In this connection we must not overlook the fact that these institutions were undertaken, in the first instance at all events, for the benefit of T.B. ex-service men, towards whom the nation, quite rightly, felt that they were under a deep debt of obligation. Accordingly, a very considerable proportion of the capital expenditure involved in these settlements has been obtained from voluntary contributions subscribed

for the benefit of ex-service men. This fact has rather tended to obscure an issue of great importance which those of us who have to deal with local authorities cannot ignore.

2. The second point to which I wish to draw attention is that the further experience gained confirms the view held in pre-war days—viz., that a large proportion of tuberculous patients are temperamentally unsuitable for colony or settlement life.

3. The third point is that a good deal of the success of tuberculosis institutions depends very largely on the personality, inspiration, and power of organization of those in charge.

4. It seems obvious that, after all is said and done, permanent village settlements can only at the best provide *for a very limited number of T.B. patients.* If permanent settlement is of the essence of the situation, as it is at the institutions to which I have referred, and we bear in mind that the total number of "settlers" dealt with is some 200 to 300 each, and that the capital expenditure and annual upkeep involved is, to say the least, considerable, I want to ask the question, What *effective* contribution can such permanent village settlements be said to make towards the solution of a problem which involves the death of some 40,000 persons annually, and the presence in the community at any one time of certainly not less than 250,000 tuberculous persons, in various stages of active disease, not to mention the large number of new cases which are annually notified to the medical officers of health?

I submit, therefore, that, although the permanent village settlement may be a justifiable expression of the nation's desire to do its level best for the welfare of the tuberculous ex-service man whose disease may be attributed to his war service, such settlements cannot, for the financial and other reasons which I have given, be regarded as having proved themselves worthy of inclusion in the national scheme for the treatment of the tuberculous civilian. I do not say they have no value, but I believe the large sums of money which they cost could be used to much greater advantage in the efficient development of other portions of the national scheme for overtaking tuberculosis, such as the improvement of the dispensary system, the provision of more prolonged sanatorium treatment of favourable cases, the establishment of an efficient organization throughout the country for the care of tuberculous patients, etc.

Vocational Training Colleges.

These centres, in so far as they amplify the need for the continuance of extended sanatorium treatment, are, however, in a different category. It is true that in some instances they have been conceived on too ambitious, and perhaps somewhat unpractical, lines.

There are cases where the Committees concerned in their management have made an initial error in purchasing large country houses, and

even large landed estates, as the basis of operations. In consequence, they have found themselves saddled from the beginning with entirely unsuitable premises, which, in addition to involving a large initial capital expenditure, have also involved the expenditure of considerable sums of money in adapting the premises purchased for their use as colonies. Moreover, the annual cost of maintaining the buildings and grounds in good order has been correspondingly heavy.

Further, the mistake has been too commonly made of sending to the colony men who, by reason of the stage of disease, or by temperament and physical condition, could not be regarded as suitable for colony life.

Apart from these fundamental errors, the criticism may be justly made that training rather than treatment appears to be made the paramount consideration, whereas a study of pre-war experience would have showed that primarily the colony was really, as I have already said, an extension of sanatorium treatment.

To make matters worse, the complete absence of any organization for the provision of a suitable post for every colonist before leaving the colony has been a most disastrous oversight. It would have been much more prudent had the training colony been closely linked up with a care organization, whereby responsibility for the finding of a suitable occupation for the colonist on discharge would have been shared by the medical officer of the colony and by the care organization of the area in which the colonist ordinarily resided. For these reasons it must be admitted that vocational training colonies have in many instances proved to be much less successful than they might have been.

I plead, therefore, for an immediate realization and frank recognition of these facts and a return to the sound conceptions upon which the original idea of the colony was based—namely, that the colony is an expansion of the sanatorium for a certain proportion of patients for whom such extended treatment is necessary. Until this is done, I feel convinced that comparative failure will continue to be the record of most of the vocational training colonies.

Finally, I would submit that, not only in relation to training colonies, but also in connection with the development of tuberculosis schemes as a whole, it is essential to have constantly in the minds of those of us who are responsible for carrying them out a clear conception of the character and natural history of the disease tuberculosis.

General Conclusions.

In judging of the provision necessary for dealing with tuberculosis, we should keep in view certain fundamental principles, which may be summarized as follows:

1. Tuberculous infection is almost universal throughout the older civilized populations.

2. The obvious manifestations of the infection are numerous and vary much in character and degree.

3. In the past, and largely up to the present time, attention has been directed for the most part to the grosser, which are in chief part the later, manifestations of infection, notably pulmonary tuberculosis and various forms of crippling, such as diseased bones and joints.

4. During more recent years it has been demonstrated that tuberculosis infection is, in the majority of instances, contracted in childhood, and that manifestations occurring later in life—at whatever date and however varying in degree—are, as a rule, resultants of an earlier infection.

5. Although infection is thus widespread and generally contracted in childhood, only a small fraction of those who contract infection suffer seriously therefrom.

6. While the essential infection remains the same, the varying character of its outward (or clinical) manifestation is conditioned largely by the varying resistance on the part of the infected individual. This in turn is dependent to some extent on individual (racial?) quality, and in great degree on environmental conditions, using the term environment in its widest sense.

7. In approaching the problem of treatment, attention must be directed to both elements in the problem: (*a*) to the infection proper, and (*b*) to the degree of resistance which may be offered to the spread of infection, either through inherent quality of tissue, or through suitability or unsuitability, or environmental conditions.

8. The aim of treatment should be to reduce, as far as possible, occasions of exposure to contagion and to minimize the results of infection by all suitable means, direct and indirect.

9. The treatment of an individual patient is successful in proportion as treatment is commenced early. Early treatment may succeed in *de*tuberculizing the infected persons *before* the grosser manifestations of the disease have occurred. Treatment on those lines will be most effectively undertaken in childhood. Such "anticipatory *de*tuberculization" has its most significant range of application in childhood—*i.e.*, from the moment that there is evidence of tuberculization.

10. In proportion as treatment is made effective throughout a community—whether in childhood or at later stages—by the application of physiological—*i.e.*, sanatorium—methods to cases at the *curable* stage, the need for measures, institutional or other, for the grosser manifestations will lessen, and presently in large part disappear. *This should be the ultimate aim of tuberculosis schemes.*

11. Meanwhile cases of more advanced disease, whether chronic or acute, will continue for some time to claim our attention, and hence, in the meantime, the need for hospitals and institutions for advanced

cases, etc., as contrasted with the sanatorium proper, will continue.

12. But in proportion as the anticipatory measures referred to, and sanatorium treatment at the curable stage, are brought into effective operation, the need for institutions for advanced cases (hospitals, etc.) will lessen.

13. The keynote of the tuberculosis dispensary, tuberculosis school, sanatorium, and training colony is *de*tuberculization and recovery, their purpose being to anticipate events and prevent the development of grosser manifestations.

14. The grosser manifestations of tuberculosis which burden communities and clog anti-tuberculosis schemes are the resultant of past ignorance and failure to act in time.

15. The more scientific outlook of to-day and the better direction of effort will limit, and tend finally to prevent, the occurrence of grosser cases.

16. Up-to-date experience in areas where modern tuberculosis measures have had a reasonable run points remarkably in this direction, and this is further confirmed by the consistent, steady decline in the tuberculosis death-rate.

17. While suitable accommodation must be made in the meantime, and even for a considerable period, for the subjects of the later grosser manifestations of tuberculosis, it is most undesirable to stereotype and perpetuate institutions for the accommodation and treatment of cases which medical science indicates should be a steadily diminishing group.

18. The modern conception of the etiology of tuberculosis emphasizes strongly the possibility and the significance of early recognition of the infection, and deliberate treatment with a view to *de*tuberculization at the earliest possible moment.

19. That is the outlook and aim of preventive medicine, and must become more and more the outlook and aim of the general practitioner, as well as the tuberculosis officer.

20. In the course of another generation, or thereby, the chaotic group of advanced, chronic, and incurable cases which presently cumbers the problem will have progressively disappeared and need not be renewed.

THE EVOLUTION OF THE TUBERCULOSIS VILLAGE SETTLEMENT.

By P. C. VARRIER-JONES,

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Some eight years ago the most frequent criticism of the village settlement scheme for tuberculous subjects ran somewhat on these lines: "It is quite impossible to make the ordinary sanatorium patient take an interest in any work which is prescribed as part of his treatment." I pointed out that the critic would show a similar lack of interest if, instead of writing an original article for this or any other journal, he were compelled to copy in his best handwriting a motto or proverb the truth of which he did not believe. Purposeless work means boredom. Having convinced my critic that, if purposeful work were suitably graded, a different mental outlook could be encouraged in the sanatorium patient, and having shown him the products of the handiwork of such men, I was met by a further criticism that such work could not be put upon the market at an economic figure; and moreover, even if this were done, no one would buy it for fear of infection. I pointed out that the whole of this criticism was founded not on experience but on a mental picture peculiar to the critic and those who held similar views, and that such a mental picture could be held only by those who had little or no knowledge of economics. Having demonstrated that consumptives—ex-sanatorium patients—can, with certainty, regularity, and despatch, turn out £25,000 worth of work in a year, the final criticism is launched: "Such subsidized work will seriously compete with that of the healthy worker in the ordinary work-a-day world and produce an increase of unemployment." What a fine testimonial to the success of the village settlement scheme! What does this criticism mean? Does it indicate that the man (the ex-sanatorium patient) who was counted "down and out," who could not and would not work (criticism No. 1), and who by the very nature of his complaint prevents the sale of such produce that he may make (criticism No. 2)—that this unemployable is now a dangerous competitor with the healthy worker in field, factory, or workshop? The evolution of the argument is complete, the turn of fortune's wheel is full. The results of the village settlement were to be expected if we *believed* what has been said over and over again at innumerable conferences; if we believed that what we advocated was true; if we were not paying lip service only to our own ideas. The village settlement has evolved, and evolved naturally from the proved facts of experience.

THE CAMBRIDGESHIRE TUBERCULOSIS COLONY: A GROUP OF PATIENTS' CHALETS.

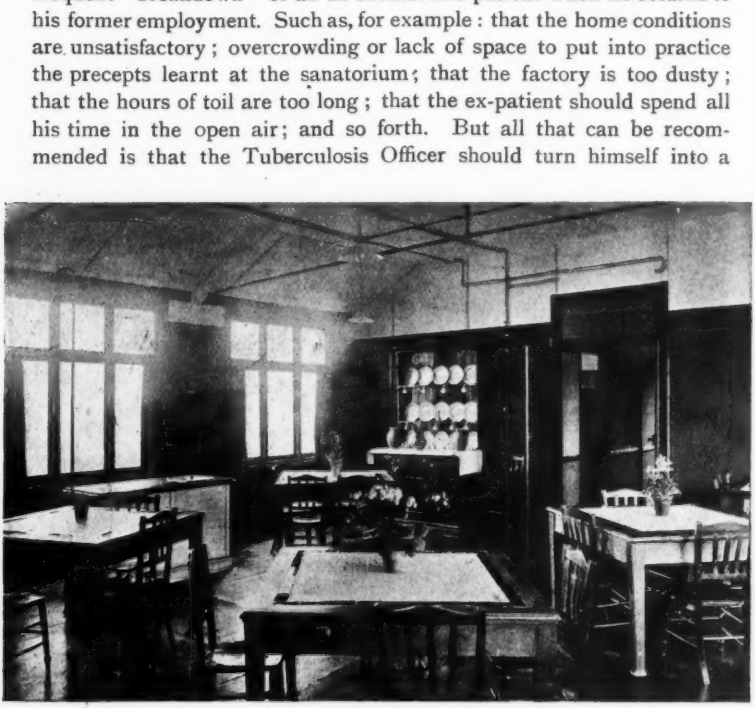
THE CAMBRIDGESHIRE TUBERCULOSIS COLONY: ONE OF THE COTTAGES IN THE VILLAGE SETTLEMENT.

THE CAMBRIDGESHIRE TUBERCULOSIS COLONY: MODEL COTTAGES IN VILLAGE SETTLEMENT.

Note the open-air sleeping balcony at the back of the house.

THE CAMBRIDGESHIRE TUBERCULOSIS COLONY: ST. PETER'S HOSTEL.

Those best versed in the tuberculosis problem have laid stress upon one or two factors which are held to be responsible for the very frequent "breakdown" of an ex-sanatorium patient when he returns to his former employment. Such as, for example: that the home conditions are unsatisfactory; overcrowding or lack of space to put into practice the precepts learnt at the sanatorium; that the factory is too dusty; that the hours of toil are too long; that the ex-patient should spend all his time in the open air; and so forth. But all that can be recommended is that the Tuberculosis Officer should turn himself into a



THE CAMBRIDGESHIRE TUBERCULOSIS COLONY: DINING-ROOM IN ST. PETER'S HOSTEL.

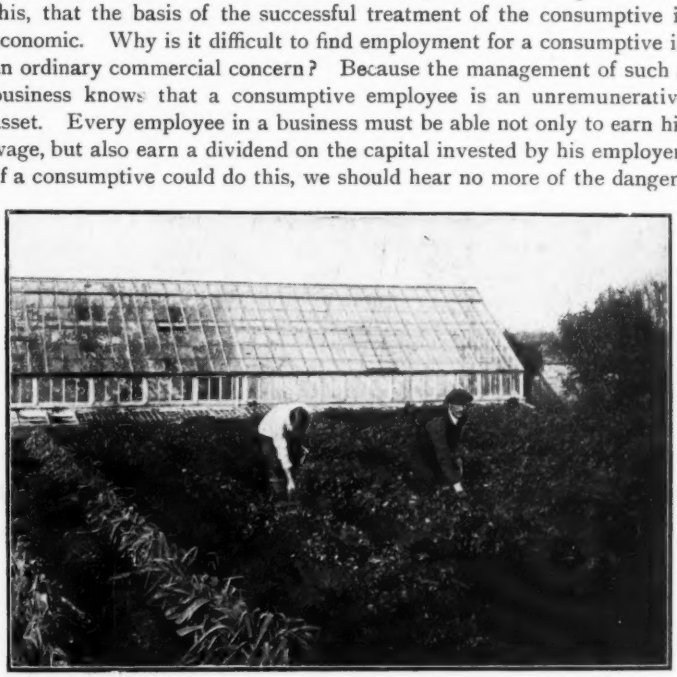
Registry Officer and, with the help of the Labour Exchange, should find light employment, either in the municipal park or in the better-class inhabitants' gardens, for his patient. A letter I have received this morning from a working man in —— graphically illustrates the difficulties under which the ex-sanatorium patient labours. He says: "I should esteem it a favour if you will kindly inform me if there is any possibility of my being admitted to the Colony at Papworth. I was a patient six years under —— T.B. Dispensary, but as I had to cease working in the city as ——, was transferred to the —— T.B. Dispensary at ——, where I now attend, where I am told to get a light job in the open, if possible. . . . I am willing to work, fairly handy, and have a fair knowledge of gardening, and am ready to learn anything fresh."

I have been a member of an After-Care Committee for some years. The difficulties of finding suitable employment for ex-sanatorium patients are well-nigh insuperable, and it is with the utmost difficulty that the Committee is prevented from becoming an adjunct to the local Board of Guardians in dealing out small doles of money and milk, a proceeding utterly inadequate to meet the case of the unfortunate unemployable consumptive. What is the alternative? Municipal workshops? I can state from experience that no municipal workshop, however hygienic, can solve the *housing difficulty*. If a consumptive is

THE CAMBRIDGESHIRE TUBERCULOSIS COLONY: PORTMANTEAU-MAKING IN THE LEATHER GOODS' DEPARTMENT.

employed for four hours a day in such a shop and has to spend the rest of the day in a crowded dwelling, there is one result, and one only—failure. His health deteriorates, his family becomes infected, and the vicious circle continues. I have elsewhere stated that we waste money when we deal with the consumptive only, and neglect his family. The family is the unit to be dealt with. The economic position of an ex-sanatorium patient is such that tinkering with the problem will produce only disappointment. The conception of the municipal workshop—fortunately there is no such thing in existence—does but touch the fringe of the question. Does it prevent infection in the home? Does it provide an environment for the family in which massive infection cannot take place? Can it provide that environment for the patient himself where he may cease to be a danger to the community?

However complicated the question of dealing with the family as a unit *may be*, however thorough the measure *must be*, let us not deceive ourselves. If there is one lesson which Papworth has taught us it is this, that the basis of the successful treatment of the consumptive is economic. Why is it difficult to find employment for a consumptive in an ordinary commercial concern? Because the management of such a business knows that a consumptive employee is an unremunerative asset. Every employee in a business must be able not only to earn his wage, but also earn a dividend on the capital invested by his employer. If a consumptive could do this, we should hear no more of the dangers



THE CAMBRIDGESHIRE TUBERCULOSIS COLONY: MARKET GARDENING BY PATIENTS.

of "infection" in the workshops as an excuse for not employing him. The problem of the employment of the ex-sanatorium patient becomes appreciably simpler when this truth is grasped. It becomes a question of, How much or what percentage of remuneration can such a man earn?

And the answer to this question is becoming clear. The average ex-sanatorium patient can earn his wage *at his own trade*, provided the large overhead charges are taken off his shoulders, and provided the environment is adapted to his condition both physically and mentally. If this is true, the evolution of the village settlement becomes clear. Every large manufacturing concern has at once—provided the statement above written is true (and I have no doubt in my own mind from the experience gained at Papworth)—a vital interest in the industrial

settlement. Each manufacturing concern situated near the village settlement, in the area which in the future such a village settlement will drain of its consumptive population, will see to it that its consumptive workers are provided in the village settlement with work exactly like or similar to that which they had been trained to do in the commercial concern. In other words, such workers, instead of being turned out to find the light job in the open air, will be transferred from the normal workshop to the sub-standard workshop. The capital being forthcoming, the consumptive wage-earners will—as in fact at Papworth they do—earn that which is their due. The factory in the town has its

THE CAMBRIDGESHIRE TUBERCULOSIS COLONY: THE CARPENTER'S SHOP (PORTABLE BUILDINGS SECTION).

counterpart in the village settlement, the latter differing from the former in these respects: hours regulated to the consumptive's strength; pace moderated; dividend earnings much reduced or entirely foregone. As in the Papworth Industries, all grades of workers can be employed—managers, foremen, accountants, clerks, skilled workers and apprentices—all can be employed to their own benefit and that of their families. Housing accommodation, as at Papworth, and all the amenities of life must be provided. The result will be a happy, contented population; hope instead of anxiety; family life instead of separation.

The view of the evolution of the village settlement makes it possible to get rid of that "training" which leads to nowhere. No partially trained consumptive ever succeeds in obtaining a job in a

commercial firm at the trade in which he was trained. The reason for this has been given above. But there is a further reason. The trainee himself knows his hopeless position in trying to obtain employment, and soon tires of taking an interest in his work. He has no desire to "learn a trade," though, like all of us, he is keen on earning his living. Herein lies the difference between the industrial village settlement, such as Papworth, and a training colony. Time and time again trainees from such a colony arrive at Papworth, and immediately give up their "training occupation" when they find they can be employed at their own trade under suitable conditions. All the money, therefore, spent on this training might as well have been poured down the drain. What they and we, for them, require, is the opportunity to earn a living. This opportunity, as far as a consumptive is concerned, is not to be found in the commercial world, but as soon as it is provided in a settlement the worker grasps it with both hands. But such employment must be the right article; no camouflage will deceive him. The industrial worker knows better than we do whether a workshop is so well run as to give him security of employment. You cannot deceive him. What he wants is security of employment, a fair wage for a fair day's work, and an opportunity to invest his capital—*e.g.*, the knowledge he has acquired of his trade from the apprenticeship stage onwards. All those who for him advise change of occupation are of necessity at the same time advising destruction of his capital. It is this "destruction of capital"—*i.e.*, of the knowledge a patient has of a trade—which in our training colonies has proved so disastrous. Let the man, then, use his own capital, whether he be manager, foreman, or craftsman, and let the industries be linked with those run by healthy workers outside, and as at Papworth the result will prove successful.

Gradually and along these lines striving to get to the root of the problem, refusing to be deceived by patchwork schemes, the country will evolve a method of dealing with the consumptive population which will mean the eventual stamping-out of the disease by raising a tubercle-resistant race in a suituable environment—the village settlement.

THE CARE AND AFTER-CARE OF TUBERCULOUS PERSONS.

By F. G. BUSHNELL,

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The tuberculosis medical service as it exists to-day is incomplete and wasteful, and itself requires "First Aid," as the Red Cross Society would say. A system that leaves the treatment of the mass of tuberculous persons at the stage where the patient returns to almost certain relapse and permits the spread of infection to others, after sanatorium or hospital treatment, is unsound and even inhuman. We must not wait, as some would have us do, for general hygienic, social, and economic improvements to suppress tuberculosis, but make a direct frontal attack on its infectivity. This is as important in its prevention as "sapping and mining" by general measures. In the following epitome of conclusions I believe I have made out a case for a Government inquiry, where further data can be obtained and details worked out. I premise that it is felt by all that an end should be put to the present inhuman system of allowing persons suffering from pulmonary or non-pulmonary tuberculosis to return to the conditions under which he or she has contracted the disease after just enough treatment has been provided at a sanatorium or hospital to enable the patient to leave the institution. As the result, the patient relapses in most cases and infects his fellow-workers.

After carefully considering data obtained from all available sources, the following conclusions have been arrived at: 1. Adequate treatment for both pulmonary and non-pulmonary tuberculous patients in sanatorium or hospital must precede employment in all cases—viz., convalescent after active disease, quiescent, or chronic and incurable. 2. Employment is good, both physically and mentally, if the patient is fit for work and is under medical supervision. It must always be under medical supervision, and suitable work prescribed in regulated "doses." 3. The constant medical supervision of a complete care and after-care organization prevents the spread of tuberculosis and lessens the sickness rate of the disease. 4. A complete care and after-care scheme, affording training and remunerative, or partially remunerative, employment is of economic value both to patient and to community, and lessens the financial burden to the nation. 5. Provision should be made by the State and by the local authority for training sections

or "extensions" at sanatoria and hospitals for men, women, and children, such patients to be selected as suitable cases. 6. Provision should be made by the State and by the local authority for training and treatment centres, and village settlements for temporary or permanent residents, under medical supervision. 7. Industrial and agricultural training and employment should be available in such centres. 8. Workshops should be provided in such centres, and especially for urban districts, under medical supervision. 9. The State and local authority should organize such centres, and should finance such schemes and assist financially the patient and his family to exist during incapacity, partial or complete. 10. Voluntary agencies should assist in such schemes (5, 8). 11. (*a*) Patients, while training in sanatoria or residential settlements, and after training during employment, should be housed at such centres as long as their physical state indicates the need. (*b*) Patients who have returned to their homes, and are employed either in municipal or approved workshops or allotments, or under ordinary industrial conditions, should receive the assistance, supervision, and control of the State and local authority in housing when their home circumstances require this.

The above conclusions are based on the opinions collected by means of a Questionnaire; a study of publications issued by British, American, and Continental authorities and committees; and personal experiences gathered mainly in connection with my professional work in connection with patients from the Devon and Cornwall Tuberculosis Colony.

Employment.—The opinion expressed in replies received was, without exception, in favour of employment in the majority of cases at a sanatorium with training section, afterwards at a colony or training centre, and followed by agricultural or industrial occupation under medical supervision and hygienic environment—always in suitable and selected cases. Patients were found to improve in physical, mental, and general conditions in the majority of cases. They put on flesh, there was less cough and spit, but especially it helped to remove discontent, and patients became brighter with the prospect of becoming wage-earners, more reliable, and less querulous. The replies as to the effect of employment under ordinary industrial conditions where the patients lived at home showed that results were very variable. There was the usual tendency to resume the old occupation, as the fullest remuneration could be earned at it. If the conditions of this were not satisfactory, and if patients could not regulate their life according to their state of health, relapses were common. On the other hand, if the conditions of work were satisfactory, or fairly so, and the factors producing the disease (as bad home surroundings) were improved, the general health might be maintained. As long as the health continued fairly good, the ability to support themselves and their families resulted in a contented

mind, and removed the worry which had such a depressing effect on a willing individual. The mental health and outlook usually improved then with employment of such patients, but relapses frequently occurred —the physical health especially if the housing was bad.

Care and After-Care.—The replies showed that care and after-care were necessary, and should be continuous; that, when thoroughly carried out, it was in general of therapeutic value and of economic assistance to the patient (and to the community); that it should be organized both (*a*) as to the character and methods of training and employment, (*b*) as to the financial assistance in such schemes, and (*c*) in the maintenance of the patient and his family by the State and the local authority aided by real voluntary helpers. The State should approve, define, and forward the scheme, and the duty should be laid upon the local authority to work it out by a combination of agencies. The housing of patients while training should be in colonies or village settlements (*i.e.*, after sanatorium treatment and training), and also when permanently employed, if their physical condition indicated the continued need for such a life. For those who returned to their homes and were employed under supervision in work-rooms or allotments, or under ordinary industrial conditions in the vicinity of their homes, then housing suitable should be provided, controlled, supervised, or improved, if necessary, by the local authority.

Sir George Newman gives reasons why the State should intervene, and approves of training sections at sanatoria, industrial colonies, and village settlements, and a complete scheme of after-care.[1] Dr. A. S. MacNalty states that a solution of the problem on these lines should be recognized by the local authority as "the crown of a tuberculosis scheme."[2] And Dr. F. J. H. Coutts strongly supports the need for, and value of, care and after-care as follows:[3] "In my view, assuming that the physical condition of the patient is such that he is fit for work, and assuming that the type of work and conditions under which the work is carried out are satisfactory, it is good for the patient—both physically and mentally—to have employment, whether at a training and treatment centre or under industrial conditions and that it is bad for him to have nothing to do, whether he is at a residential institution or at home. Of course, under both conditions, it is much more satisfactory if the patient can carry out the occupation under more or less sheltered conditions and under close medical supervision. This is the

[1] For evidence of Sir G. Newman, Chief Medical Officer, Ministry of Health, with that of forty other witnesses and memoranda, see Inter-Departmental Committee on Tuberculosis (1919). Consult also Reports of Chief Medical Officer, Ministry of Health, 1921, 1922, 1923.

[2] See communication made by Dr. A. S. MacNalty, a Medical Officer of the Ministry of Health, to the Tuberculosis Society, January 18, 1924.

[3] See report of speech by Dr. F. J. H. Coutts, C.B., Senior Medical Officer, Ministry of Health, at the Ninth Annual Conference, N.A.P.T., 1923.

reason why a village settlement for tuberculous persons may be looked upon as the ideal arrangement when it can be made available." Sir R. Philip[1] regards working colonies for the formal training in industrial and agricultural work of patients after sanatorium treatment as of therapeutic and economic value in suitable cases. He considers this should be supplemented by the establishment of municipal or voluntary workshops, by small-holdings, and by residential settlements, all under medical guidance, and advocates *continuous* care and after-care. Dr. Varrier-Jones,[2] of Papworth Colony, believes that he has established the proof that the colony is the natural expansion of the rôle of the sanatorium. He defines the tuberculosis colony as a community of consumptives in which hygiene and economic factors have been adjusted to suit the abnormal physical and mental state of its members. He believes that the spirit of After-Care Committees, with their meagre help, must be superseded by that new spirit which will not tolerate a return to the conditions of life of the working classes which existed in 1914. Dr. J. Johnstone, of Hairmyres Colony, Lanark, is entirely in favour of employment at a treatment and training centre, and expresses his belief in its therapeutic, economic, and preventive value. He advocates industrial workshops at a colony, followed by employment in small workshops under the local authority in the vicinity of the patient's home, but the patients should be housed as long as necessary in village settlements supported by State aid. He is against employment under industrial conditions, both for pulmonary and non-pulmonary cases of tuberculosis. Mr. I. B. Kidner[3] revealed the widespread attention that has been given to the subject of work for the tuberculous during and after "the cure" in the U.S.A. He states that its value as a therapeutic measure is now generally recognized as fourfold: (*a*) The morale and discipline is improved, and contentment afforded the patient. (*b*) Mental activities are re-established, maintained, and enhanced. (*c*) Muscular tone is restored. (*d*) Training towards economic re-establishment is provided. His address deals in detail with work during and after the cure, and includes opportunities for employment in or about the sanatorium, in the normal channels of commerce and

[1] See speech by Sir R. Philip, M.D., LL.D., Professor of Tuberculosis, Edinburgh, at the National Association for the Prevention of Tuberculosis, July, 1923.

[2] See work by Dr. Varrier-Jones, Hon. Medical Officer of the Cambridgeshire Tuberculosis Colony at Papworth, "Industrial Colonies and Village Settlements for the Consumptive."

[3] See communication from Mr. J. B. Kidner, Secretary of the National Tuberculosis Association of the United States of America, at the Third Conference of the International Union against Tuberculosis, 1922, quoting the transactions of the National Association for the Study and Prevention of Tuberculosis of the Montefiore Hospital, New York City; the re-education series of bulletins of the Federal Board for Vocational Education, Washington; of the City of Chicago Municipal Tuberculous Sanitary Bulletin; of the United States Public Health Reports; and of numerous eminent American sanatorium physicians, and various Boards of Health.

industry, in productive workshops specially organized for tuberculous persons, and, with less experience, of agricultural and industrial settlements similarly organized. Among his conclusions, his fifth is that there will be a large number of persons in whom the disease has been arrested, who will be unable to work under ordinary conditions of employment. Provision must be made for such persons in special workshops, and agricultural and industrial settlements. Dr. Guinard,[1] of the Bligny Sanatorium, expressed the current views of Continental physicians that treatment at a sanatorium must be confined to regulated rest, exercise, and training; that formal work at this stage may be an actual danger; that after-care requires schools of professional re-education, temporary and permanent agricultural and industrial colonies, and settlements and special workshops.

My own experience of patients at sanatoria and of the Devon and Cornwall Tuberculosis Colony, and other colonies and training centres, and of the Plymouth Care and After-Care Committee, is that there are numbers of patients whose future existence depends on suitable employment under medical supervision in healthy conditions *after* adequate treatment (with or without training at a sanatorium), and on continuous care and after-care. *I hold that no training centre or colony or workshop should be approved or established which is not definitely under medical supervision and control.* They should be regarded as commercial sanatoria for sick men, and not as business propositions in the ordinary sense. If run on the last lines, they will be dismal failures. I believe that unsuitable or unregulated work undertaken when treatment by rest or graduated exercise in a sanatorium is indicated is a danger. There are definite medical contra-indications to work. Suitable temperament is essential to success as a trainee or colonist, and the "work-shy" civilian or ex-service tuberculous patient is useless for employment. With a number of ex-service pensioners for tuberculosis the award of 100 per cent. pension (whether the disease is active or not) results in disinclination to useful work of any kind. For years they have not worked, partly because there has been no need or call to do so; some are young and others are middle-aged. In the case of a civilian *who has the habit and need to work* the inclination exists, and he makes a suitable trainee or colonist.

In conclusion, I desire to express my warm thanks to the following who have responded to my Questionnaire or who have assisted in providing information: Dr. T. Campbell, Medical Superintendent, Wharfdale Sanatorium, Middleton, Yorks; Dr. W. B. Christopherson, Chief Tuberculosis Officer for the County of Norfolk, Shire Hall, Norwich; Dr. Lissant Cox, Central Tuberculosis Officer to the Lancashire

[1] See views of Dr. Guinard, of the Bligny Sanatorium, at the Third Conference of the International Union against Tuberculosis, 1922.

County Council, County Offices, Preston; Dr. F. J. H. Coutts, C.B., B.Sc., D.P.H., Chief Medical Officer of the Tuberculosis Department of the Ministry of Health; Dr. R. Adam Forsyth, Medical Superintendent, West Heath Training Centre; Dr. J. Johnstone, Medical Superintendent, Hairmyres Colony, Lanark; Dr. A. W. Macpherson, Medical Superintendent, Burrow Hill Colony, Frimley, Surrey; Dr. H. Spurrier, Medical Superintendent, the National Sanatorium, Benenden, Kent; Dr. Jane Walker, Medical Superintendent, the Maltings Farm Sanatorium, near Colchester, Suffolk; Dr. F. R. Walters, Medical Superintendent, Crooksbury Sanatorium, near Farnham, Surrey; Dr. H. R. Winkley, Tuberculosis Officer, Reading.

I desire also to acknowledge my indebtedness to the following: Sir Henry Gauvin, of Lord Mayor Treloar Hospital and College, Alton, Hants; Mr. Carridi, Shropshire Orthopædic Hospital, Oswestry; Sir W. H. Hamer, Chief Medical Officer to the London County Council; Dr. G. B. Dixon, Chief Tuberculosis officer for the City of Birmingham; Dr. Smyth, Hawkmoor Sanatorium, Devon; Dr. Marcus Paterson, Colindale Hospital, Hendon; Dr. Noel Bardswell, London County Council; Dr. A. S. M. MacGregor and Dr. J. A. Wilson, Glasgow. The latter in his report for 1922 says: "Village settlement as a method of treating the individual case is admirable; as a public health investment it might not justify its cost. For these reasons a proposal must be regarded from a strictly tentative and experimental standpoint." This, I hold, is entirely wrong. We require a new sense of health, sickness, and cash, and a new and comprehensive data such as a Government enquiry would afford.

A NEW ADJUNCT IN THE TREATMENT OF TUBERCULOSIS.

By JANE WALKER,
M.D.,
Medical Superintendent, East Anglian and Malting's Farm Sanatorium, Nayland, Suffolk.

A LIST of antituberculosis remedies advocated or employed from the time of Hippocrates, 400 B.C., up to to-day might well fill many volumes. Truly their name is legion. It is obviously quite impossible to mention a tithe of them in the compass of a small article. It is sufficient, however, to state in regard to the innumerable vaccines, sera, and antigens of modern times that the methods which held good 2,400 years ago for the treatment of tuberculosis are still undoubtedly

the best, judging by the severe test of results. It was fully recognized from earliest times, and is now admitted by those competent to form an unbiassed opinion, that the general condition of the patient—that is to say, the "soil"—plays a predominant part, and that rational methods to assist recovery must aim primarily and fundamentally at the rebuilding of the entire organism. This must always be true, bearing in mind that the formation of a tuberculous centre in the body is always preceded by a general weakening, which leaves a resistance insufficient to hold out against the inroads of the tubercle bacilli.

The first cause of tuberculosis is not Koch's tubercle bacillus, but the subnormal state of the general health of the individual. As Dr. Auguste Rollier very truly states, "the physiological balance has been upset, and the general equilibrium must be restored to make recovery possible." The medical profession cannot afford to neglect any factor which, while always subservient to the health essentials of sunshine, cleanliness, good food, etc., can assist nature to restore the tuberculous to health, and, therefore, any medicinal weapon which claims to be valuable in restoring "physiological balance" by modifying the "soil" should be welcomed and put to the test of clinical experience by those in a position to do so.

Encouraged by the published clinical records of medical practitioners abroad who during the past twelve years have had considerable experience with a product known as "Angiolymphe," I decided to put twenty of my patients on this treatment as and from March 11 of this year. "Angiolymphe" is a vegetable extract now available in ampoules for intramuscular injection. The formula as published indicates that in each 2 c.c. there are 0·05 gramme of the total glucosides of various irideæ. The sponsor and introducer of "Angiolymphe" is Dr. Rous of Paris. His experience is supported by that of many Continental observers, and the condition of bacteriolysis claimed to be induced by "Angiolymphe" is attributed to intense phagocytosis as a sequel to its administration.

As my experience with this product only dates from its introduction into England early in March last, it is not advisable to comment upon results further than to confirm the observations of others, who state that "Angiolymphe" is always well borne by patients, is non-toxic, and gives rise to no complications. Further, I have observed no ill results from its administration. It is never followed by pain or abscess formation. In over 1,000 injections I have not had a single complaint of pain following the injections. Its effect in promoting a sense of well-being is indeed very noticeable, both during its administration and in the pauses of six to ten days recommended between each series.

In my experience, "Angiolymphe" is an excellent tonic. It appears to help to promote sleep, to lessen cough and expectoration,

to steady the pulse and improve the appetite. In some of my patients this general improvement has been maintained. This applies particularly to early cases. Not only do the patients look better, but they feel much better. In one particular case, that of a young woman, where the pulmonary tuberculosis was complicated with intense depression and uncontrolled temper, "Angiolymphe" had an extraordinarily good effect on the patient's mental outlook, while at the same time she became calm and reasonable. In another case the patient herself was so convinced that she had benefited that she inquired where she could continue the treatment when she went home.

I think the results are sufficiently good and encouraging to justify more extended trials. The experience of other users of "Angiolymphe" in England would be of interest, as it is only by a trial over long periods on many cases that definite conclusions can be arrived at regarding any reputed aid to recovery in a disease so protracted and fluctuating as pulmonary tuberculosis. I certainly think that much wider trials are justified.

THE ANNUAL CONFERENCE OF THE NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS: AN IMPRESSION.

By W. ALLEN DALEY,

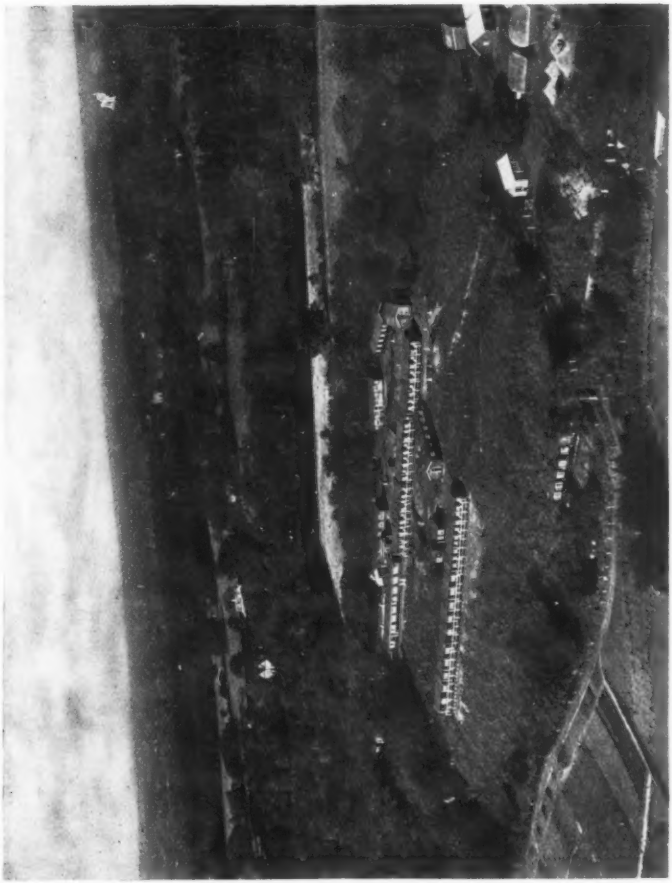
M.D., B.A., B.SC.,

Medical Officer of Health and School Medical Officer to the County Borough of Blackburn.

As a medical delegate to the recent and Tenth Annual Conference of the National Association for the Prevention of Tuberculosis, I gladly comply with the Editor's request that I should provide a short record and impression. The conference took place in London on July 3 and 4. It was well attended, and delegates were present from public authorities and from voluntary organizations interested in tuberculosis throughout the British Isles; there were also representatives from Holland.

The conference concentrated its attention on the part played by training colonies in the campaign against tuberculosis, and on the organization of care committees. The whole of the first day was devoted to a visit to the Burrow Hill Training Colony, which is charmingly situated in Frimley, Surrey, some thirty miles from London. The accompanying illustrations depict the general surroundings, the interiors of three of the buildings, and a specimen of the work in which the patients

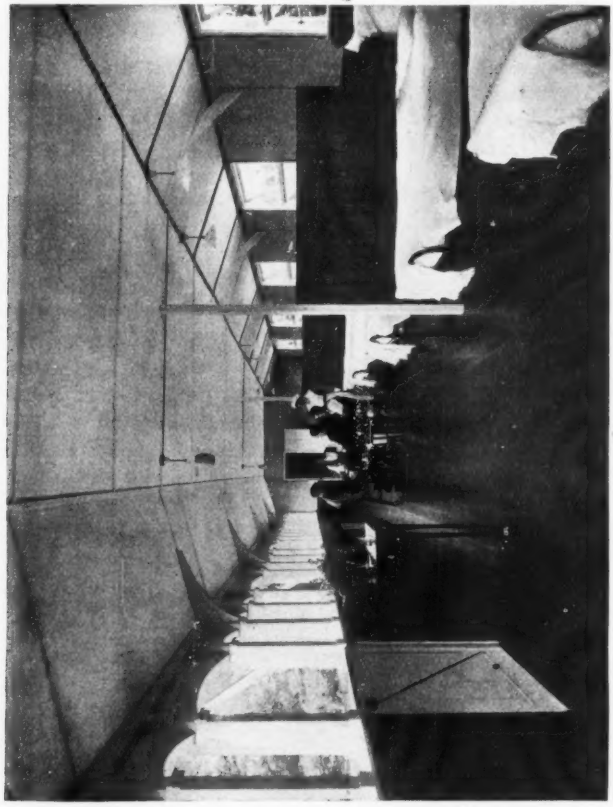
are engaged. The colony was established by the Association in 1917 to meet the sudden need created by the discharge from the Army, on account of tuberculosis contracted during war service, of between thirty and forty thousand men; up to now only ex-service men have been admitted, but it is obvious that the supply of tuberculous ex-service men will cease soon,



BURROW HILL TRAINING COLONY: GENERAL VIEW FROM AEROPLANE.

and consideration will have to be given to the future of the colony. At the beginning of 1924 there were in residence twenty-one sanatorium cases and thirty-eight trainees. Training is provided in market gardening, farming (including poultry-farming, pig-keeping, and bee-keeping), and rural carpentry. A well-equipped farm is included in the estate

controlled by the Association. The cost of maintenance of the colony and sanatorium during 1923 appears to have been £9,758. The cost per patient per week was stated to be £2 6s. 11d. in the sanatorium, and £2 12s. 7d. in the training section. Eighty-seven patients were discharged from the training section during 1923; forty only had completed their training, thirty-eight proved unsuitable for training, and nine

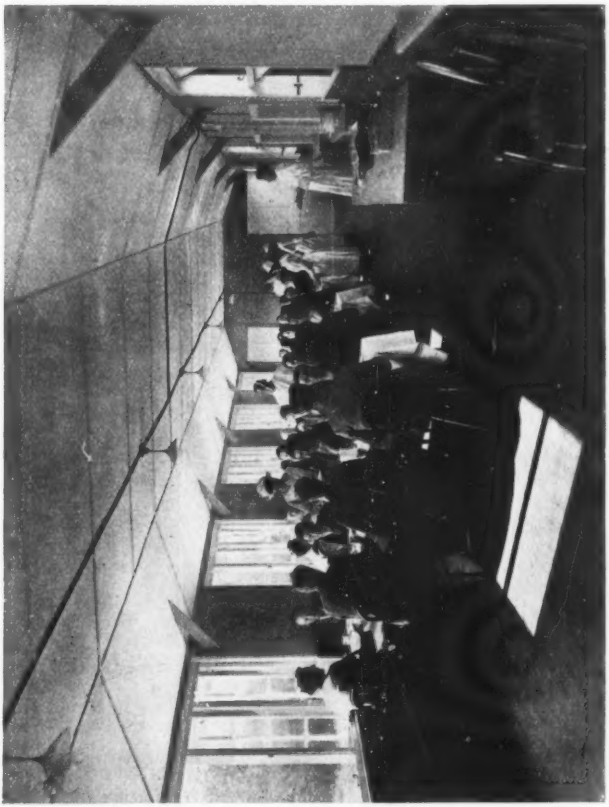


BURROW HILL TRAINING COLONY: INTERIOR OF SANATORIUM BLOCK.

were discharged on domestic grounds. The Medical Superintendent (Dr. A. H. Macpherson) informed the meeting that up to December last seven out of nine discharged on completion of training in rural carpentry had obtained employment, and nine out of thirty-one discharged from the gardens.

The visitors were given every opportunity of conversing with the patients, and it was at once obvious that the discontent which is to be

found in practically every institution for the tuberculous was not absent here. It was perhaps unfortunate that the patients were allowed to be present at the meeting held at the colony subsequent to the visit of inspection, for the interjections of the patients, when questions relating to food and the instruction given to the trainees were being answered,



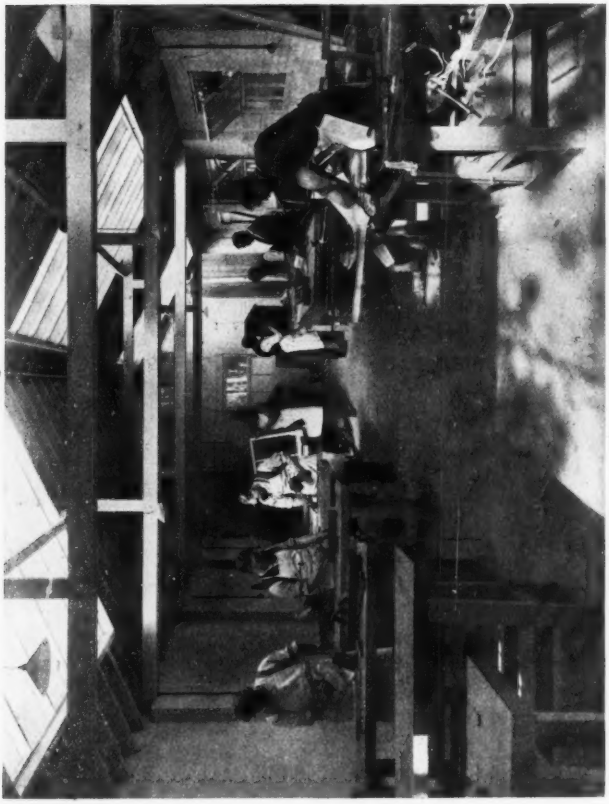
BURROW HILL TRAINING COLONY: PATIENTS AT MID-DAY MEAL.

would lead delegates unfamiliar with the peculiarities of this class of patient to believe that there was something seriously amiss.

It is a matter for earnest consideration whether or not the expenditure on institutions of this class can be justified. Less than half the trainees complete their training; less than half of those who have completed their training work at the occupation which they have been taught. Dr. Lissant Cox, in the course of the conference, informed the meeting that Lancashire, with a population of one and three

quarter millions, had sent only fifty-two men for training in outside colonies. Twelve were still there, and, of the others, only seven had completed their training.

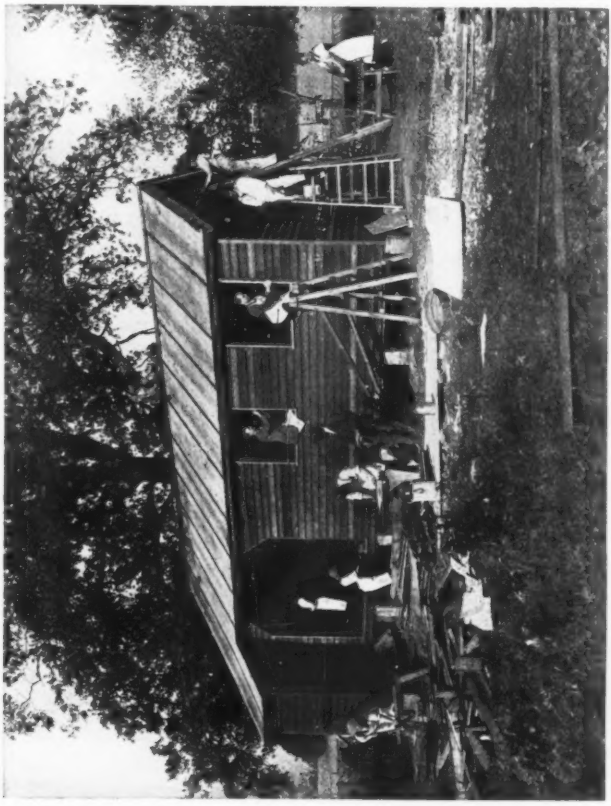
Added to all this is the fact that the "beneficiaries" appear to be highly dissatisfied with what is being done for them. If this is the case with pensioners whose families receive an allowance while they are being trained, how will the tuberculous civilian patient regard the scheme?



BURROW HILL TRAINING COLONY: PATIENTS WORKING IN CARPENTRY SHOP.

The meetings on July 4 were held in the Robert Barnes Hall of the Royal Society of Medicine. Sir Arthur Stanley presided whilst the opening speech was being delivered by Mr. Wheatley, the Minister of Health. The Minister, in a sympathetic address, stated that the great problem of the moment, so far as tuberculosis was concerned, was to know what to do with patients on discharge from sanatorium with their

disease quiescent. Dr. F. N. Kay Menzies read a most valuable paper on training colonies, in which he emphasized the view that the colony is an expansion of the sanatorium for a certain proportion of patients for whom such extended treatment is necessary. A valuable discussion took place. It was, on the whole, unfavourable to training colonies if they were to be regarded as agencies for teaching tuberculous men a



BURROW HILL TRAINING COLONY: PATIENTS BUILDING GARDEN SHED.

new occupation which would be their future means of livelihood. The view was expressed by Dr. Noel Bardswell that, even if the training is not used, the training scheme is valuable in that it keeps men under treatment longer than would otherwise be the case. Mr. Allen, of Leeds, described the valuable work done by the tuberculous ex-service men's society there. Their "factory in the field" provides work for a considerable number of men, and is self-supporting. They undertake

road-making, carting, window-cleaning, or any other occupation suitable for the men upon their books.

Sir Robert Philip presided at the afternoon meeting, when Lieut.-Colonel J. A. Ellis, B.Sc., the Association's lecturer, read a paper on "The Organization of Care Committees." He made many important suggestions, which, on the whole, were well received, although the not uncommon conflict took place between the protagonists of official and voluntary work.

No one could complain that this was a conference where nothing was learnt. The clash of disagreement and criticism was heard on every side, and this, indeed, is far more valuable from the point of view of the delegate than the expression of views to which everyone can assent.

NOTES ON THE FOURTH CONFERENCE OF THE INTERNATIONAL UNION AGAINST TUBERCULOSIS.

By BERNARD HUDSON,

M.D., M.R.C.P.,
Resident Medical Superintendent of the English Sanatorium, Montana, Switzerland.

The opening of the Fourth Conference of the International Union against Tuberculosis took place on Tuesday morning, August 5, in the Palais de Rumine at Lausanne, Switzerland. The organization was excellent, numerous direction boards and notices enabling participants to find their way to the various departments, such as press and post offices, information bureau, etc. Each participant received an envelope containing the official badge of the conference, the programme, printed matter consisting of the various papers to be read, and a really excellent work entitled "La lutte contre la tuberculose en Suisse," by Dr. Oliver. On Tuesday afternoon Professor Calmette, of the Pasteur Institute, Paris, dealt with the question: "Do there exist in Nature or can there be artificially produced Saprophytic Varieties of Koch's Bacillus which possess the Property of becoming Virulent Tubercle Bacilli?" This interesting communication was followed by a lecture delivered by Professor Sahli on "The Defence of the Organism against the Tubercle Bacillus." A reception was held the same evening in the Casino at Lausanne, to which all attending the conference were invited. On August 6 Professor Forssner, of Stockholm, opened the second subject for discussion, "The Relationship between Pregnancy and Tuberculosis," which was followed by a lecture given by Professor Léon Bernard on "Prophylaxis in Childhood against Tuberculosis." The same evening a soirée was held in the Lausanne Palace Hotel.

On August 7 Sir Robert Philip, of Edinburgh, opened the third discussion, dealing with "The Effects of the Antituberculosis Campaign on the Diminution of the Mortality from Tuberculosis in Different Countries," which terminated the official proceedings of the conference. In addition, excursions to various places of interest were organized for those who wished to take part in them, and at the close of the conference many took the opportunity of participating in an organized tour to some of the chief Swiss tuberculosis centres—Leysin, Montana, Bern, Davos, and Arosa—the party breaking up on August 16 at Zürich. Amongst well-known representatives of the British medical profession were Sir Humphry D. Rolleston, Bart. (President of the Royal College of Physicians), Dr. J. J. Perkins, Dr. Nathan Raw, Dr. M. Davidson, and altogether about thirty members of the British medical profession attended the conference.

On Saturday, August 10, a party of 140 of the foreign participants of the congress visited Montana. They were received by the President of the Medical Society, Dr. Stephani, and the members of the society. A banquet was held in the evening at the English Sanatorium, at which about 150 persons sat down. The next morning was spent in visiting the various establishments of the resort, and the guests departed in the afternoon *en route* for Davos and Arosa.

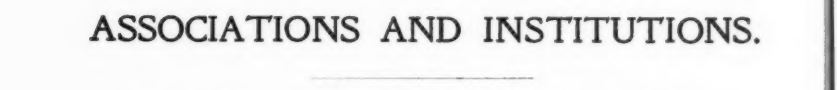
During this week many friends were made, and much was discussed, many points of view being exchanged. Many of the members availed themselves of this tour, and although necessarily an arduous and tiring affair, it was most thoroughly appreciated, and the organizers had the warmest thanks of all concerned.

The proceedings of the conference will be published in due course. The gathering has been a great success, and will undoubtedly have furthered considerably the scientific study of measures for the prevention and arrest of tuberculosis. The chief benefit of such an international conference depends upon the meeting and comparing of notes of fellow-workers from different lands, and at Lausanne a true spirit of fellowship prevailed.

What impressed me perhaps most of all at the conference was the prevalence of a spirit of friendliness and the manifestation of a real *entente cordiale* between representatives of the different nations. One had many delightful, interesting, and instructive conversations with various members from America, France, Italy, etc. I always think that through talks of this kind, and in the social intercourse and exchange of ideas, that the greatest value of a gathering of this kind is to be found. The formal business, especially the papers and lectures delivered by men who have an international reputation, were most valuable and stimulating; but probably it was at the gatherings and receptions, where the guests broke up into little informal parties, that much of the interest and value of the gathering centred.

ASSOCIATIONS AND INSTITUTIONS.

THE WARWICKSHIRE KING EDWARD VII. MEMORIAL SANATORIUM.



THE WARWICKSHIRE KING EDWARD VII. MEMORIAL SANATORIUM.

We have received the following description of the new sanatorium for Warwickshire from the Medical Superintendent, Dr. Frederick Heaf:

The Warwickshire King Edward VII. Memorial Sanatorium occupies a fine position on the high ground of Hertford Hill, to the right of the Birmingham road, about two miles from Warwick. From the entrance gates the imposing frontage of the administration block forms a fitting background to the life-like statue of King Edward VII., which stands in the centre of the grounds. The sanatorium accommodates 150 beds—66 for men, 50 for women, and 34 children—and has been built for the reception of early cases only. Four of the pavilions are built of brick, and have a long central corridor passing through the cubicles, which hold two or four beds. The fifth pavilion is of wood, and contains thirteen single cubicles; and the sixth block is used as a hospital, being fitted with well-heated single wards, good bath-rooms, and a corridor passing along the north side of the wards. The upper part of the administration block is used as the Nurses' Home, and in the lower part are the medical officer's and matron's rooms, committee-room and offices, and consulting-rooms, with a laboratory and modern X-ray apparatus in the east wing of the building. The patients' dining-room, which is between the administration block and the kitchen, is a large, lofty room artistically decorated and capable of seating 150 persons; alongside it is the small dining-room for the children, which is wisely planned with the radiators under the tables. The kitchen has a central gas-range and large steam

cookers, and is conveniently situated for serving the food to the staff and patients' dining-halls. Leading out of the dining-hall is the scullery, where the patients do their own washing-up, each having their own numbered plate, cutlery, and tea-cloth. To the right of these buildings is situated the laundry, containing a modern drying-cupboard, which takes up very little space and is most efficient, and other machinery driven by electricity supplied from the power-house. This latter building adjoins the laundry, and supplies the power and lighting for the whole sanatorium. Near to it is a large garage, and a complete workshop in which all manner of repairs may be done. Although the sanatorium was opened officially by H.R.H. the Duke of York as recently as July 3, 1924, patients have been admitted since October 3, 1923. The majority of cases are treated by auto-inoculation and graduated exercises, supplemented by heliotherapy; others are treated by artificial pneumothorax, and a few with autogenous vaccines. As far as possible the children continue their education in the school attached to the children's pavilion. The sanatorium is rate-aided and has a State grant, but patients who are able to contribute towards their treatment are asked to do so according to their individual means. The sanatorium is conducted under the direction of the Warwickshire and Coventry Joint Committee for Tuberculosis. We are indebted to the courtesy of Mr. A. Erswell, photographer, of Leamington, for the loan of the block of the accompanying illustration.

The Queen Alexandra Sanatorium Fund Report for 1923–24 has just been issued, and may be obtained from the Hon. Sec., Mr. D. Vesey, 3, Camp View, Wimbledon Common, S.W. 19. The fund exists "mainly to secure the advantages of sanatorium treatment in an Alpine climate for persons of small means belonging to the English-speaking nationalities who are suffering from curable tuberculosis, but who are unable to afford the ordinary expenses of such treatment." It is estimated that a patient's weekly expenses are approximately £5, and the grant reduces this to about £2 10s. In the year ending April 30 the grants numbered twenty-eight—fourteen to men and fourteen to women.

The August number of the *Bulletin Météorologique et Médical de Leysin* contains an excellent summary of the proceedings of the Fourth Conference of the International Union against Tuberculosis held at Lausanne, August 5–7.

The Graphic for September 20 contained an illustrated article by Dr. Arthur Lynch, M.P., on "Spahlinger and his Work on Tuberculosis."

NOTICES OF BOOKS.

TUBERCULOSIS OF BONES AND JOINTS.

Professor Oehlecker, of Hamburg, has provided a work on tuberculosis of bones and joints, which is so generously provided with illustrations as to be a veritable atlas.[1] The work is divided into two parts. In the first is provided a full and helpful discussion of pathological features, clinical manifestations, prognostic points, methods of treatment, and like general considerations. An extensive section is devoted to "Röntgenuntersuchung," and there is a good account of sun and light treatment, in which Rollier's development of heliotherapy is discussed. There are illustrations of various forms of mercurial vapour and quartz lamps for the conduct of artificial light treatment. Good accounts are also given of orthopædic and general surgical proceedings, hyperæmic measures advocated by Bier, and the so-called specific treatment by various forms of tuberculins and other antigens. The second part of the volume, which is furnished with a large number of instructive illustrations, deals in detail with tuberculous lesions as met with in the various bones and joints of the body. As might be expected, a considerable number of the figures relate to lesions in young subjects. The whole work is manifestly based on wide experience and a thorough study of all aspects of the subject. We commend this serviceable monograph to the consideration of all medical advisers having to deal with cases of so-called "surgical" tuberculosis, and particularly to those who desire direction in modern orthopædic and other measures for the relief and arrest of tuberculous processes in early life.

PULMONARY TUBERCULOSIS.

Dr. R. C. Wingfield has contributed a really sensible and serviceable handbook on the diagnosis and treatment of tuberculosis of the lungs to the excellent series of "Modern Medical Monographs" edited by Professor Hugh Maclean.[2] This series aims at providing busy practitioners and heavily burdened senior students with concise, up-to-date, helpful manuals on scientific applied medicine. Dr. Wingfield's work certainly admirably attains this ideal. It is definitely addressed to the general practitioner, and in short, compact, dogmatic chapters presents just the information and

[1] "Tuberkulose der Knochen und Gelenke." Von Professor Dr. med. F. Oehlecker, Leiter der I Chirurgischen Abteilung des Krankenhauses Hamburg-Barmbeck. Pp. vi+405, with 356 illustrations. Berlin und Wien: Urban und Schwarzenberg, Friedrichstrasse, 105B, Berlin, N. 24; Mahlerstrasse 4, Wien I. 1924. Price, unbound, Swiss frs. 33.75; bound, Swiss frs. 40.

[2] "Modern Methods in the Diagnosis and Treatment of Pulmonary Tuberculosis." By R. C. Wingfield, M.B., M.R.C.P., late Physician-in-Charge of the Tuberculosis Department, St. Thomas's Hospital; Medical Superintendent, Brompton Hospital Sanatorium, Frimley. Pp. xi+134, with 27 figures. London: Constable and Co., Ltd., 10 and 12, Orange Street, Leicester Square, W.C. 2. 1924. Price 10s. 6d. net.

guidance which the average medical adviser will appreciate. It must be remembered that practically every case of tuberculosis during its early stages comes under the care of an ordinary doctor who in most instances has had but limited experience in the recognition and treatment of tuberculous disease. Hence the value of such a wise and practical manual as that which Dr. Wingfield has prepared, and which we could wish might be read by every practitioner. The essential features of modern methods are admirably described, and the author does not hesitate to give his opinions and offer definite advice. Dr. Wingfield indicates in his opening chapter that his aim is to demonstrate the truth of the following postulates: "That in diagnosis, the universality of infection must be remembered and given its due importance. That in diagnosis, we must appreciate the fact that infection by the tubercle bacillus does not necessarily imply that the patient is at the moment suffering from clinical tuberculosis. That in the perfection of our methods of early diagnosis of active tuberculosis lies our surest way of successfully treating the disease. That active tuberculosis of the lungs is compatible with a useful life of the ordinary length, but in most cases, if this is to occur, that life must be lived under special conditions. That the standards which have to be satisfied before a case is pronounced to be cured should be so exacting as to make this pronouncement an extreme rarity, and that the surest way to get a good result in any one case is to regard it as one in which an exacerbation of the disease is probable at any moment." As to tuberculin, the sound advice is given that it is only indicated in cases in which there is no gross systemic disturbance, and should only be administered, and that with much discrimination, where ordinary methods for increasing the natural immunity of the patient have failed. There is a suggestive chapter on artificial pneumothorax, thoracoplasty, and allied forms of treatment. The X-ray illustrations are particularly instructive. In the next edition of this serviceable manual it is to be hoped that the author will discard the use of the designation *tubercular* for the now generally approved and more correct *tuberculous*.

Dr. H. Ulrici has recently published in German a particularly fine practical treatise on the diagnosis and treatment of tuberculosis of the lungs and larynx.[1] The work is most effectively produced on art paper and with beautifully executed illustrations, some in colour. The text is conveniently divided into fourteen sections, so that all aspects of the subject are presented in a form which will be appreciated by those desirous of making a complete and up-to-date study of the clinical features of tuberculosis involving the lungs and larynx. The illustrations depicting the pathological features of the tuberculous lesions are particularly good, and there is an excellent and well-illustrated section on Röntgendiagnostik. There is also a detailed and illustrated section on the technic of artificial pneumothorax. Dr. Ulrici's fine work deserves the study of tuberculosis officers and all who are making a special study of the clinical aspects of pulmonary and laryngeal tuberculosis.

[1] "Diagnostik und Therapie der Lungen- und Kehlopf-Tuberkulose: Ein Praktischer Kursus." Von Dr. H. Ulrici, Artztl. Director des Staat. Tuberkulosekrankenhauses Waldhaus Charlottenburg, Sommerfeld (Osthavelland). Ss. vi+263, mit 99 zum teil Farbigen Abbildungen. Berlin: Verlag von Julius Springer, 23-24, Linkstrasse, W. 9. 1924. Price, paper covers, $4.30; bound, $4.65.

MANUALS FOR MEDICAL ADVISERS AND WORKS OF REFERENCE.

The Mayo Brothers and their colleagues have made the Mayo Clinic at Rochester, Minnesota, famous throughout the world, and the scientific work which has emanated from this wonderful centre of medical service and research has been of benefit to mankind in all lands. Volume XV. of the "Collected Papers," recently issued, is a handsome volume of over a thousand pages, with 218 contributions and a list of 148 contributors.[1] There are excellent indexes, and the volume is effectively illustrated. There are a number of important articles dealing with tuberculosis, and special reference should be made to "Cutaneous Tuberculosis and Tuberculids in Diagnosis," by John H. Stokes, which is of particular value on account of its numerous and instructive illustrations; "Possible Errors in the Diagnosis of Renal Tuberculosis," by William F. Braasch and Albert J. Scholl; "Tuberculous Enterocolitis," by Willis S. Lemon; "Lupus Erythematosus as a Systemic Disease," by William H. Goeckerman; "Tuberculosis of the Genito-Urinary Tract," by Hermon C. Bumpus, jun.; "The Surgical Treatment of Tuberculosis of the Genito-Urinary Tract, including the Kidney, Bladder, Testicles, and Seminal Vesicles," by Verne C. Hunt; "Surgery in Cases of Renal Tuberculosis," by E. Starr Judd and Albert J. Scholl. Dr. William J. Mayo, in his paper on "The Septic Factor in the Three Great Plagues," declares that "the septic factor in tuberculosis is the most important factor. . . . The greater number of patients with tuberculosis die from intercurrent disease in which sepsis plays the chief rôle. . . . So important is the septic factor in tuberculosis that the main consideration in any operation for the disease is to avoid mixed infection." Every medical adviser who desires to keep abreast with progressive medicine should study this notable volume.

The last volume of "Studies from the Rockefeller Institute" contains forty-four communications dealing with subjects relating mainly to pathology, bacteriology, chemistry, and biophysics. There are several papers on Experimental Surgery by Alexis Carrel and Albert H. Ebeling. All research workers should make a point of seeing this collection of important studies.[2]

Students, doctors, and others desiring to keep in touch with French medical literature, and especially by following the progress of medicine in France as presented in annales, archives, journals, and other periodical publications, will be grateful to Dr. Dabout for his admirable French medical dictionary.[3] This, as Professor Roussy indicates in his

[1] "Collected Papers of the Mayo Clinic and the Mayo Foundation." Edited by Mrs. M. H. Mellish. Vol. XV. Pp. xviii+1377, with 410 figures, numerous tables, and bibliographies. Published for the Committee of Publications, Mayo Clinic and Mayo Foundation, Rochester, Minnesota, by W. B. Saunders Company, of Philadelphia, and 9, Henrietta Street, W.C. 2. 1924. Price 63s. net.

[2] "Studies from the Rockefeller Institute for Medical Research." Vol. XLVIII. Pp. vi+597. New York: The Rockefeller Institute for Medical Research, Avenue A, and Sixty-six Street. 1924. Price $2.00.

[3] "Petit Dictionnaire de Médecine: Expressions Technique—Termes Médicaux." Par le Docteur E. Dabout, Médecin Légiste de l'Université de Paris. Préface par le Docteur Gustave Roussy, Professor Agrégé à la Faculté de Médecine de Paris et Médecin de l'Hospice Brousse. Pp. vii+662. Paris: Librairie J. B. Baillière et Fils, 19, Rue Hautefeuille. 1924. Prix frs. 20.

preface, is the outcome of some ten years' regular, diligent, discriminating work. There are no less than 12,000 words, and the subject-matter is effectively arranged in two columns to the page, and is printed in clear type. This practical work certainly meets a want which many British and American medicals have often experienced.

Messrs. Ward, Lock and Co., Ltd., have rendered health and holiday seekers incalculable service by the publication of their reliable, up-to-date, and inexpensive red-covered illustrated guide-books.[1] Among new editions a ninth and revised issue of the handbook to Hastings, St. Leonards, and neighbouring centres has just appeared. Hastings and the adjacent district of Sussex is justly popular as a summer resort, and is becoming increasingly appreciated by those who desire a fresh-air life under modern conditions during winter days. The new guide provides just the information and guidance which will be of assistance to medical advisers and patients as well as to those desiring suggestions and information regarding interesting health resorts within easy reach of London.

Messrs. Ward, Lock and Co. have also just published a ninth and revised edition of the long and justly approved guide to South Devon and South Cornwall, originally compiled by Messrs. C. S. Ward and M. J. B. Baddeley.[2] It is a member of the "Thorough" Guides series. With its numerous maps, picturesque and helpful descriptions of coast and moorland, and informing practical data regarding routes, fishing, golf, and local objects of interest, it forms a delightful and indeed an indispensable companion for all who visit the fascinating West Country for either health or pleasure, rest or sport, antiquarian pursuits or artistic work.

Paris maintains her premier position, not only as a centre for pleasure and a resort for education, but as headquarters for Red Cross work, international union against tuberculosis, and like agencies for world welfare. It is an ideal place for the conduct of scientific research. All students, investigators, and others visiting Paris should provide themselves with the new edition of Baedeker's "Paris." This unrivalled guide has undergone thorough revision, and is now up to date. It is printed on thin paper, and is provided with a large number of particularly serviceable maps. As an appendix, there is a fine key plan of Paris, a plan in three sections, five special plans of the most important quarters, and an index to the plans, together with much data of general practical service.[3]

The delectable Duchy of Cornwall is justly famous as a health and holiday resort. For all lovers of the West Country, and especially those

[1] "A Pictorial and Descriptive Guide to Hastings and St. Leonards, Bexhill, Battle, Rye, Winchelsea, Bodiam, Pevensey, Herstmonceux, etc. Ninth edition, revised, with maps and illustrations. London: Ward, Lock and Co., Ltd., Warwick House, Salisbury Square, E.C. 4. 1924. Price 2s. net.

[2] "South Devon and South Cornwall, with a Full Description of Dartmoor and the Isle of Scilly." Originally compiled by C. S. Ward, M.A., and M. J. B. Baddeley, B.A. Ninth edition, revised. Pp. 320, with twenty-six maps and plans, fitted with bookmarkers, etc. London: Ward, Lock and Co., Ltd., Warwick House, Salisbury Square, E.C. 4. 1924. Price 6s. net.

[3] "Paris and its Environs, with Routes from London to Paris. Handbook for Travellers." By Karl Baedeker. Nineteenth edition. Pp. lviii + 482, with 66 Maps and Plans. Leipzig: Karl Baedeker, Publisher; London: T. Fisher Unwin, Ltd., 1, Adelphi Terrace, W.C. 2; New York: Charles Scribner's Sons, Fifth Avenue at 48th Street. 1924. Price 10s. net.

able to enter into the delights of the pedestrian, Mr. A. G. Folliott-Stokes's charming work on the Cornish coast and moors will prove a treasury of information and suggestions.[1] It is dedicated "To all who feel the witchery of the West," and provides a fascinating account of the chief features of Cornwall as revealed in an exploration of the old coastguard path from Marsland Mouth to Cawsand Bay, practically a complete circuit of the Cornish coast. There are also delightful descriptions of the moorland districts. The volume is equipped with an excellent map indicating the course of this fascinating tour. The illustrations are numerous and particularly appealing. All who visit Cornwall should provide themselves with this informing and picturesque book. It is just the work which will bring something of the charms of the West to many invalids and patients, lovers of the tors and caves, and haunts of rare birds and wild flowers.

Doctors and others using the motor-car for professional work or the pursuit of health and recreation should secure a copy of *The Motor Guide*.[2] This new quarterly provides the motorist with an authoritative and independent handbook full of reliable information sure to be of practical service. There is an admirable road map of England and Wales, a buyers' guide, list of authorized Ford dealers, directory of repairers and agents, particulars regarding hotels, parking places, and an estimate of road mileage from London of most towns. The guide should be found in the pocket of every car.

The People's League of Health have issued an illustrated popular booklet by Dr. Rollier, of Leysin, an English version of his "Comment lutter Contre la Tuberculose."[3] Tuberculosis officers and others conducting an anti-tuberculosis educational propaganda will find this brochure rich in suggestive material.

[1] "The Cornish Coast and Moors." By A. G. Folliott-Stokes. With 162 illustrations from photographs by Alex. Begbie, John C. Douglas, and the Author. Pp. 367. London: Stanley Paul and Co., Ltd., 8, Endsleigh Gardens, W.C. 1. Price 10s. 6d. net.

[2] *The Motor Guide* has its editorial offices at Spencer House, South Place, E.C. 2, and is issued by the New Century Publishing Company, Ltd. Price 1s. net.

[3] "How to Fight against Tuberculosis," by Dr. A. Rollier, translated by Miss A. E. Gloyn and Macleod Yearsly, F.R.C.S. Pp. 56, with illustrations. Published by the People's League of Health, 12, Stratford Place, W. 1, of which the founder and hon. organizer is Miss Olga Nethersole, R.R.C. 1924. Price 1s. net.

PREPARATIONS AND APPLIANCES.

EQUIPMENT FOR SANATORIA, HOSPITALS, AND PATIENTS.

THE HYGIENIC W.C. ADJUSTABLE FOOT REST designed by Mr. E. Josselyn, A.M.I.Mech.E., is a novelty which may well be welcomed on physiological grounds. The act of defæcation among so-called civilized Western people is carried out in a much less hygienic

THE HYGIENIC W.C. ADJUSTABLE FOOT REST.

manner than is customary among children, primitive people, and dwellers in Eastern countries. Mr. Josselyn's invention is likely to be of particular advantage to delicate, elderly, and afflicted persons, especially those who are the subjects of chronic constipation, gastro-enteroptosis, hernia, and lesions enfeebling the abdominal wall. Many tuberculous patients troubled with persistent cough, or pelvic or abdominal disorders, will find the foot rest adds greatly to their comfort and general well-being. The chief features of this new appliance are

clearly indicated in the accompanying illustration.[1] It provides proper means for the maintenance of a squatting position. The foot rest can be raised or lowered readily to meet the requirements of all persons. There is no difficulty in fixing the appliance anywhere on wood, concrete, or tiled floors. The weight is 16 pounds.

THE PORTABLE SPADE BOOT SCRAPER.

THE PORTABLE SPADE BOOT SCRAPER invented by Major C. Van Der Byl, as indicated in the accompanying figure, is a simple novelty, but one which has only to be used to be appreciated.[2] Its chief advantage is that it quickly and easily removes all mud from every part of the foot, both upper and lower. It will be of much service for the cleansing of boots by patients engaged in gardening, poultry-farming, and other forms of open-air work, as well as by pedestrians and sportsmen. The wise and labour-saving housekeeper will see that this new appliance is available in every house. It is a most desirable part of the equipment of every golf club.

THE DELLEX RUBBER MATS[3] will be found of much service in sanatoria and hospitals as well as for use in customary domestic life. They are made from the highest grade of pure plantation rubber specially prepared and so subjected as to render it unaffected by ordinary heat or grease. There are a variety of forms in different

colours. Some are for table and tray use, others for nursery service, and there are varieties for the kitchen which are intended to diminish wastage from breakages. The attention of doctors and nurses should be particularly directed to the Special Inside Bath Mat. This adheres

[1] The Hygienic W.C. Proper Adjustable Foot Rest is made by the P.A.F.R. Co., 36, North Gate, Newark-on-Trent, Notts. Price 45s., delivered carriage free. Full particulars will be sent on application.

[2] The Portable Spade Scraper can be obtained from the makers, "Spade Scrapers'" Ltd., Wappenham, Towcester, Northants. Price 9s. 6d., carriage 9d. extra.

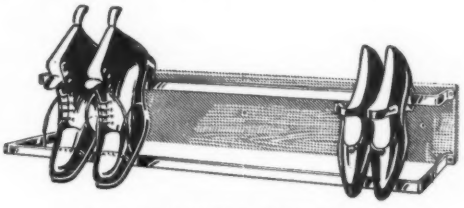
[3] Particulars regarding the Dellex Mats may be obtained on application to the makers, Dellex Ltd., 42, Baker Street, W. 1. The prices range from 1s. 2d. to 12s. 6d.

by suction to the bottom of the bath, and so goes far to remove the danger of a patient slipping and cutting the head on the taps or bruising the body.

A reliable fountain pen is now counted as a necessity for almost everyone who makes use of pens, ink, and paper; and for patients in hospital, sanatorium, or travelling for health, one of these modern appliances must rank as an indispensable companion. A novel but admirable form of fountain pen has recently been introduced under the name of the JOHN HANCOCK CARTRIDGE PEN.[1] Its essential feature is a cartridge-filling system, which provides complete immunity from mess and freedom from leakage. The pen is fitted with a first-class 14-carat gold nib suited to the requirements of the writer, and the barrel is so shaped as to contain the cartridge, which is supplied ink-filled. As the cartridge is screwed into position it is punctured, and the ink flows readily to the pen point. The pen can be easily cleaned and kept in perfect working order. Each pen is fitted with a clip, which forms part of the cap.

Those who for pleasure or necessity, for the maintenance or recovery of health, or simply because they are campers, fishers, sportsmen, and the like, choose to live an open-air country life, have to count on one serious drawback—the irritation which arises from the attacks of mosquitoes, gnats, and various forms of flies. In order to meet this difficulty Messrs. C. Farlow and Co., Ltd., the well-known manufacturers of equipment for anglers, have introduced an excellent MOSQUITO AND MIDGE VEIL.[2] It is made of silk material, and is constructed so that it can be worn over a hat or cap, hang loosely around the head, and be tucked in under the collar of the coat. It is light in weight, does not seriously interfere with vision, and is comfortable to wear. The same firm also provide an ANTI-FLY LOTION, which has been used by fishers and others for twenty years with great advantage.

Tuberculous and other patients participating in graduated exercises and work in the open should pay special attention to the hygiene of the



THE CHALLENGE BOOT TIDY.

feet. It would be well if medical advisers gave more attention to this matter. It is also of the utmost importance that there should be

[1] The John Hancock Cartridge Pen is supplied by McCorquodale and Co., Ltd., and can be obtained from the J.H.P. Syndicate, Ltd., 23A, Old Bond Street, W. 1. Price 25s. 6d. complete, and with three spare ink-filled cartridges. Another model is provided at 17s. 6d., the nib being slightly smaller.

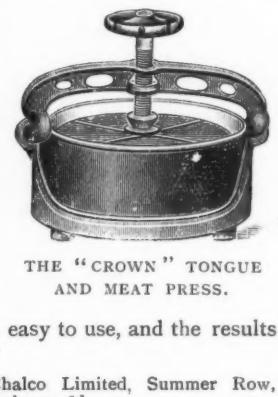
[2] The "Farlow Silk Mosquito and Midge Veil" and "Farlow's Mosquito, Midge, and Gnat Proof Lotion," are supplied by C. Farlow and Co., Ltd., 10, Charles Street, St. James's Square, S.W. 1. The price of the former is 6s. 6d., and the latter can be obtained in bottles—1s. 6d., 3s. 6d., and 5s.

inspection of foot-gear. Boots and shoes should be selected with discretion, and properly cleaned and cared for. The accompanying illustration of THE CHALLENGE BOOT TIDY indicates the essential points in a simple, inexpensive, strong, serviceable contrivance for keeping boots in hygienic, orderly, and good condition.[1] It consists of two light metal bars mounted on a dark stained board, and the whole can be easily secured in any recess or other suitable position.

THE MULTIPLE COMBINATION WATERING-CAN.

THE MULTIPLE PATENT COMBINATION WATERING CAN will be appreciated by all gardeners, and we particularly commend it to patients and health-seekers who are taking up horticulture in sanatoria, settlements, or in their own gardens.[2] The chief features of this novelty are indicated in the accompanying figure. This cleverly contrived can consists of a combination of two roses and a jet in one piece. As is well known by all who have a greenhouse or garden, detachable roses and jets on the common forms of watering-cans are very liable to be mislaid, lost, or damaged. With the new can these objections are overcome. By a simple and almost instantaneous adjustment the gardener can arrange for the use of a simple jet, a thrust outflow, or the play of a fountain. Each can is fitted with a tubular handle. The cans vary in size, and have capacity of from two to eight quarts, while the prices extend from 5s. 8d. to 11s. 8d., according to size.

In the preparation of corned beef, pressed tongue, and other fresh-meat foods likely to attract the fickle appetite of tuberculous patients and other delicate subjects much assistance can be obtained by the use of THE "CROWN" TONGUE AND MEAT PRESS.[3] This novelty may well have place in every wisely appointed home and hospital. The chief features are indicated in the accompanying figure. The apparatus consists of a hopper 6½ by 3½ inches, and having a capacity of about seven pounds. The frame is rigid, and coated with a varnish which is innocuous and acid-resisting. The press is easy to use, and the results are excellent.



THE "CROWN" TONGUE AND MEAT PRESS.

[1] The Challenge Boot Tidy is made by Chalco Limited, Summer Row, Birmingham. Price 7s. 6d. each; mounted on wood, 10s. 6d.

[2] Messrs. Robinson Brothers, Ltd., the well-known firm of manufacturers of spraying machines, fertilizers, and insecticides at West Bromwich, Staffs, are the makers of the Combination Watering-Can.

[3] The "Crown" Tongue and Meat Press is manufactured by Follows and Bate, Ltd., Gorton, Manchester, and is sold by leading ironmongers and hardwaremen. The price is 9s. 9d.

A thermos flask is almost a necessity for patients and others living the open-air life, and for travellers generally. But most of those now in use are provided with corks, which in a short time become contaminated, and not only have an unpleasant odour, but oftentimes give an undesirable taste to the contents. A substitute has recently been introduced as the "NEW ERA" VULCANITE STOPPER.[1] It is claimed for it that it is absolutely hygienic, and provides a stopper which is air-tight, non-conducting, durable, inexpensive, and allowing for perfect cleaning by boiling. These stoppers are made to suit all types of vacuum flasks.

"NEW ERA" VULCANITE STOPPER.
(Patent applied for.)

HYGIENIC AND THERAPEUTIC SPECIALITIES.

Under the designation of "TERSUL HILLER"[2] a preparation has been introduced which it is claimed has been useful in the treatment of tuberculosis. It is a white, odourless, stable, and almost tasteless powder, consisting of silica and lactate, hypophosphate, phosphate, fluoride, and carbonate of calcium, together with magnesium phosphate and milk sugar. Under Professor Gewecke's supervision it is manufactured by the Biopathic Laboratories of Wilhelm Hiller at Hanover. Silicic acid has been shown to be a normal constituent of certain human tissues. It has also been stated that in pulmonary tuberculosis the body becomes impoverished of this agent, and it is suggested that thereby the powers of resistance to the tubercle bacilli are diminished. As is well known, calcium has for long, and particularly in France, been a favourite agent in treating tuberculosis. The present combination of silicic acid with calcium salts has been tried on animals and administered to tuberculous patients, and it is claimed that the results are promising.

ATOQUINOL,[3] or allyl phenylcinchoninester, is a new synthetic drug manufactured by the Society of Chemical Industry in Basle, Switzerland. It is said to possess analgesic, antipyretic, and antiphlogistic properties, and to be of service not only as a uric acid eliminant, but as a helpful agent in the relief of various arthritic affections, fibrositis, neuritis, polyneuritis, neuralgia, and other disorders for which salicylates are usually advised. It is administered in tablet form, or can be applied locally in painful arthritis as an ointment.

PEROXIDE OF HYDROGEN[4] has for long been valued as a particularly effective, non-toxic, oxidizing, antiseptic agent, and in various forms has been used as a desirable deodorant and disinfectant. A solid crystalline preparation has now been introduced which will prove highly con-

[1] The novel stopper as above described is made by the "New Era" Stopper Company (C. J. R. Beauchamp), 34, High Street, Battersea, S.W. 11. The price is 9d. each.

[2] Full particulars regarding the so-called "coincident silica" and calcium therapy and the administration of "Tersul Hiller" can be obtained on application to the sole agents for Great Britain and the Colonies, Stafford and Stafford, Ltd., 150, Southampton Row, W.C. 1.

[3] Particulars and specimens of Atoquinol can be obtained from the Clayton Aniline Company, Ltd., 68½, Upper Thames Street, E.C. 4.

[4] The Solid Hydrogen Peroxide is manufactured by F. W. Berk and Co., Ltd., 1, Fenchurch Avenue, E.C. 3, from whom particulars and specimens can be obtained on application.

venient for many doctors, nurses, and patients. It is a powder containing 35 per cent. of H_2O_2, and is put up in one pound paraffin waxed cardboard cartons. One part of the solid hydrogen peroxide should be dissolved in 11 parts of water by weight in order to produce a solution free from mineral acids, and equal in strength to the Liquor Hydrogen Peroxide, B.P. It is proposed to provide this agent in the handy form of tablets containing specified quantities.

Taylor's CIMOLITE has for many years been a popular local application for infants and young children. It is a specially prepared form of white fuller's earth, and for nursery use is oftentimes prescribed as "Terra Cimolia Lævigata."[1] This admirable soothing and protective agent will be found very advantageous for patients undergoing heliotherapy and fresh-air treatment. It is perfectly harmless, and yet provides a toilet application which will be specially appreciated by subjects who readily perspire or whose skin is easily irritated by sun, winds, or exposure to damp.

NASMINT has been introduced by the makers of the justly popular Formamint Tablets as a "germ-killing snuff." It is a white powder with pleasant methol odour, possesses antiseptic and sedative properties, and affords much relief in catarrhal conditions of the nasal passages. The powder is supplied in a neat, compact, convenient, metal snuff-box.[2]

KRYSOLGAN, or amino-auromercaptobenzolcarbonate of sodium, is one of the new gold thiophenols now being manufactured by the Chemische Fabrik auf Actien, and is advocated as a promising preparation for the treatment of tuberculosis.[3] It is supplied in ampoules containing from 0·01 to 0·1 gram, or $\frac{1}{7}$ to $1\frac{1}{2}$ grams, and when dissolved in 1 to 2 c.c. of sterilized distilled water is administered by intravenous injection. In tuberculous subjects, both local and general reactions usually result. It is sometimes given in combination with tuberculin.

VERAMON is a compound of about 72 per cent. of dimethyl-aminophenyldimethyl-pyrazolon and 28 per cent. diethylbarbituric acid, and is strongly recommended as a reliable and safe analgesic in dental work, neurological cases, and for service in general surgery.[4]

Consumptive and other delicate patients who find comfort in cigarette smoking, and yet are denied the customary brands, should try the "ASORBAL" CIGARETTES. They are fitted with a filter of absorbent vegetable fibre, which provides for the protection of the mucous membrane of the respiratory passages. The tobacco is of the best Turkish and Virginia growth, and the cigarettes are made under strictly supervised hygienic conditions.[5]

[1] Cimolite is supplied by John Taylor, 30, Baker Street, Portman Square, W. 1, from whom particulars can be obtained on application.

[2] Specimens and particulars regarding Nasmint will be supplied to medical advisers on application to Genatosan Limited, Loughborough. The reduced price is 1s. 11d per tube.

[3] Full particulars regarding the use of Krysolgan, together with a copy of a brochure on "Clinical Experiences with Krysolgan," by Dr. Adolf Feldt, will be sent to any medical practitioner on application being made to A. and M. Zimmermann, Ltd., 3, Lloyd's Avenue, E.C. 3.

[4] Particulars regarding Veramon can be obtained on application to A. and M. Zimmermann, Ltd., 3, Lloyd's Avenue, E.C. 3.

[5] Full particulars regarding the "Asorbal" Cigarettes can be obtained on application to the makers, Alfred Dunhill, Ltd., with head offices at 137-143, High Street, Notting Hill Gate, W. 11.

THE OUTLOOK.

TUBERCULOSIS AND THE HEALTH OF THE NATION.

THE "Fifth Annual Report of the Ministry of Health" contains statistical and other data relating to the health and well-being of the people of England and Wales.[1] The matter is grouped under the headings of Public Health, Local Government and Local Finance, Administration of the Poor Law, and National Health Insurance. A special section is devoted to the work of the Welsh Board of Health. Valuable statistical data are provided regarding tuberculosis. On March 31 of this year the number of tuberculosis officers working under the schemes of local authorities in England was 340, and the number of approved dispensaries was 446, including 20 out-patient departments of general hospitals for special forms of treatment and X-ray examination, etc. The following table shows, as at March 31, 1924, the various classes of residential institutions approved for the purposes of the schemes of local authorities, and the total number of beds of each class; and distinguishes also between institutions provided by local authorities and those by voluntary bodies:

Classes of Institution.	Number of Institutions.		Number of Beds.	
	Provided by Local Authorities.	Voluntary.	Provided by Local Authorities.	Voluntary.
1. Sanatoria (including consumption hospitals)	131	62	9,047*	4,799
2. Isolation hospitals (including small-pox hospitals)	53	—	2,249	—
3 General hospitals	1	136	20	501
4. Children's institutions ...	17	44	1,208	2,291
TOTALS...	202	242	12,524	7,591
	444		20,115	

* Including twenty-seven observation beds at eight dispensaries.

During the year arrangements have been made by several Boards of Guardians in London, with the consent of the Borough Councils, for the appointment of the tuberculosis officer of the local dispensary as consultant upon their infirmary staff, in relation to cases of tuberculosis amongst Poor Law patients admitted to the infirmaries. It is to be hoped that in all parts of the country the co-operation between the tuberculosis dispensary service and the infirmary will be facilitated and extended. The report states that experimental treatment, under

[1] "Fifth Annual Report of the Ministry of Health, 1923-1924." Pp. xii + 172. London: H.M. Stationery Office, Imperial House, Kingsway, W.C. 2. 1924. Price 5s. net.

the auspices of the Medical Research Council, has been carried out on a number of patients at the New End Hospital, Hampstead, by Professor Dryer's antigen, but "it is not yet possible for a considered judgment to be pronounced upon the value of the treatment." Reference is also made to the question of monetary contributions by patients towards the cost of treatment provided by local authorities. A circular was issued on March 3, intimating that "in considering whether a patient is in a position to contribute towards the cost of treatment, the local authority should have regard in each case to the question whether a charge could be made without detriment to the patient's ability to provide proper and adequate maintenance for himself and his dependents, and that no charge should be made unless they are satisfied on this point." Statements are given regarding financial expenditure on tuberculosis schemes. As regards the care of tuberculous ex-servicemen, the number of pensioners receiving residential treatment, including those undergoing special training, was, on April 1, 2,075. Particulars are given of the terms of an arrangement which should provide for more effective co-operation between insurance practitioners and tuberculosis officers. As to the Spahlinger treatment of tuberculosis the following statement appears: "The Minister has given M. Spahlinger assurances of his anxiety to arrange for a scientific investigation of this method of treatment in this country if and when supplies of the preparations become available." During 1923 the following new notifications of tuberculosis cases were received: pulmonary, 59,172; non-pulmonary, 20,216. And during 1923 the number of registered deaths from tuberculosis were: pulmonary, 32,097; non-pulmonary, 8,691.

Sir George Newman's Annual Reports always contain valuable information and helpful suggestions regarding tuberculosis. In the last issue is an illuminating section indicating the progress which is being made in national measures aiming at the prevention and arrest of this scourge, and giving particulars of measures for the assistance of its victims.[1] The death-rate in England and Wales from all forms of tuberculosis steadily declined from 3,481 per million in the ten years 1851-1860 to 1,352 per million in 1913, a corresponding fall being manifested in the phthisis death-rate. During the war there was a definite increase in mortality from tuberculosis, especially for the pulmonary form. In 1919 there was a sudden fall to a figure lower than any previously recorded, and this fall continued into 1920. In 1921 there was a small increase in the number of deaths from pulmonary tuberculosis in males, but a somewhat larger increase in female deaths. In 1922 there was a reduction in the number of female deaths from respiratory tuberculosis, but there was an increase of 535 in the deaths of males. In 1923 there was a reduction of over 1,000 in the male deaths from respiratory tuberculosis as compared with 1922, and a reduction of over 700 in the female deaths. The number of deaths from tuberculosis of the respiratory system is the smallest on record. In 1911 there were 14,698 deaths from non-pulmonary tuberculosis, whereas in 1923 these deaths numbered only 8,691. On March 1 of this year there were 16,458 accommodated in the 20,115 beds available, 4,569 being children. Special inquiries have been continued into the general

[1] "On the State of the Public Health." Annual Report of the Chief Medical Officer of the Ministry of Health for the Year 1923. Pp. 211. London: H.M. Stationery Office, Imperial House, Kingsway, W.C. 2. 1924. Price 3s. net.

organization of tuberculosis schemes. It is shown that the Ministry of Health aims at making each tuberculosis dispensary a co-ordinating centre in the struggle against the national menace. We quote as follows: "Under this broader view the tuberculosis officer would endeavour, by a study of the clinical phenomena, the environment of home and workshop, the family conditions, etc., to make each case a link in a chain of investigation into the problem of tuberculosis in the area, a means for discovery of hitherto unsuspected cases, and a guide to measures for prevention of the disease. The number of patients attending dispensary sessions was in some cases so large that it was difficult to understand how the tuberculosis officer could possibly devote the amount of time to the careful examination of new cases, and especially of doubtful cases, which is essential in order to form a clear opinion as to the stage and probable course of the disease, and as to the most suitable form of treatment. Comparatively casual interviewing of large numbers of old patients, who, after the initial careful investigation by the practitioner, instead of making frequent visits to the dispensary, is to a large extent a waste of the time of the expert advisers of the council, and frequently limits seriously the time available for examination of contacts, for home visitation, or for studying the preventive problem of tuberculosis in the area. Where patients are non-insured, and unable to pay for treatment by a private doctor, it is, of course, highly desirable that they should receive at the dispensary any treatment which their condition requires, but in the case of insured persons, unless the tuberculosis officer has special reasons for desiring the patient to attend the dispensary regularly and frequently, or unless some special form of treatment is considered necessary, he should consider himself rather as a consultant than as the person primarily responsible for routine treatment, and should refer the patient to his insurance practitioner for domiciliary treatment. This system involves close co-operation between the two doctors concerned." This wise advise, it may be hoped, will be heeded by tuberculosis officers. The time has arrived when a wider vision and more efficient co-operation are urgently called for: "It is of fundamental importance in all anti-tuberculosis work that the outlook of local authorities and their medical officers should be *comprehensive*. The proper conduct of the tuberculosis service depends, not only upon the efficient management of dispensaries and sanatoria, of occupational centres and village settlements, and of after-care, but upon the whole *preventive attack*. Sanitation, lighting and ventilation, the nutrition of the people, the abolition of tuberculous milk, industrial hygiene, housing, domestic cleanliness—these and ancillary questions must receive concurrent and vigilant attention." The special section devoted to cost of residential institutions demands the serious consideration of all responsible in any way for the conduct of such places. As regards sanatoria, the following conclusions are presented as justifiable: "(1) That sanatorium treatment has assisted in the cure of a considerable number of cases of tuberculosis, and in extending the useful lives of many others; (2) that better results would accrue if patients could be persuaded to stay longer in the institutions, and if the methods of treatment in all sanatoria could be brought up to the standard of the best managed; (3) that it is extremely important to get sanatorium treatment started at the earliest stage practicable, and particularly, if possible, before tubercle bacilli has been found in the

sputum." Finally, the following view is expressed: "If sanatorium treatment is to achieve its maximum effect for good it will probably be necessary, not only to select cases for such treatment with greater precision, but to retain the patients in the institutions for longer periods, and to carry this out without deterioration of the morale of the patient it is essential to provide him with suitable occupation. Hence the necessity for occupational training, or, at least, occupational treatment at a sanatorium." A suggestive section on occupation and training is provided. Under the headings of Treatment and Diagnosis, paragraphs appear on artificial diagnosis, X rays, diathermy, bacteriological and serological agents, heliotherapy, sera, and vaccines. As to Professor Dreyer's "diaplyte," it is clearly stated that this vaccine "will not provide a means of curing definitely declared pulmonary tuberculosis within a short space of time," but the opinion is expressed that "there is reason to believe that the preparation is an active one, and beneficial in certain types of tuberculous infection." But "the tests must be continued for a longer period of time before an authoritative opinion can be expressed upon this question."

Sir George Newman in his recently issued memorandum on "Public Education in Health"[1] deals with the scope and character of the voluntary health movement, and offers sound and helpful advice showing that "the mere increase of knowledge, and particularly the knowledge of preventive medicine or the ways and means of personal hygiene and well-being, can do nothing of itself to prevent disease and to safeguard health unless it be *understood*, *accepted*, and *practised*." There is a useful list of voluntary bodies engaged in educational health work. The memorandum is informing and stimulating, and is marked by such literary distinction as is always to be expected in the writings of the Chief Medical Officer of the Ministry of Health and of the Board of Education. This official publication should be studied by all tuberculosis officers and others engaged in anti-tuberculosis educational services.

THE TUBERCULOSIS PROBLEM.

Major-General Sir David Bruce, K.C.B., F.R.S., in his Presidential Address to the British Association at its recent meeting at Toronto on August 6, referred to tuberculosis as "a disease distributed over the whole world and one of the greatest scourges of civilized communities." He said: "Before all things this disease is a disease of environment. Its birthplace and home is the sunless, ill-ventilated, overcrowded room. . . . The prevention of tuberculosis is thus seen to depend fundamentally on the provision of a better environment and the education of the people in physiological living. To attain this in the older civilizations will be a hard task, entailing enormous expenditure of money and energy. . . . In the Report of the Royal Commission on the Housing of the Industrial Population of Scotland in 1917 is described the unsatisfactory sites of houses and villages, insufficient supplies of water, unsatisfactory provision for drainage, the gross over-

[1] "Public Education in Health." A Memorandum addressed to the Minister of Health by Sir George Newman, K.C.B., M.D., F.R.C.P. Pp. iv+35. London: H.M. Stationery Office, Imperial House, Kingsway, W.C. 2. 1924. Price 6d. net.

crowding in the congested industrial towns, occupation of one-room houses by large families, groups of lightless and unventilated houses in the older burghs, clotted masses of slums in the great cities—a terrible picture, the heritage of the age of ignorance, internal strife, and walled cities. The people of new countries should see to it, and doubtless will see to it, that these old evils are not perpetuated." Sir David Bruce then quotes Sir Robert Philip, Professor of Tuberculosis in the University of Edinburgh: "Were it possible to begin afresh the scheme of civilized life, were it possible to undertake anew the creation of cities and the homes of our people, were it possible to place within the recreated dwellings an understanding race, detuberculization might be quickly attained. What a magnificent opportunity for the builders of the new cities, the moulders of fresh civilizations, with the grand purpose of 'No tuberculosis.' The architect, the sanatarian, and the citizen would agree in insisting that physiological laws should be paramount, that there should be effective obedience to the larger demands of hygiene in the house, the school, the workshop, the meeting-place, and the cowshed. Mankind was born into air and sunlight: these are his natural heritage. They are more—they are the irreducible conditions of life." Sir David Bruce then shows that "the tubercle bacillus is so widespread, so ubiquitous in civilized communities, passing from one infected host to infect another, that it would seem impossible under existing conditions to prevent its spread. At present it is taught, and on what seems good evidence, that the majority of the population of our crowded cities has at one time or another been attacked by this disease. But in every hundred men who die in England only about ten die of tuberculosis, which shows that a large percentage of the population successfully resists the tubercle bacillus. When this occurs it means that the person attacked possessed powers of resistance which enabled him either to destroy the invading bacilli or deal with them so as to render them harmless." It is shown that tuberculosis is usually acquired in childhood, and if the child is placed under good hygienic conditions "there is a very good chance of effective resistance and immunity against a second attack." The perplexities of the problem is well indicated by such a statement as this: "If it were possible for a country to clear itself of the tubercle bacillus, it would appear to be incurring a great risk for an inhabitant to migrate into any neighbouring country." Finally, it is urged that "any tuberculosis scheme, however perfect in theory, will require untiring energy, patience, and perseverance to bear fruit. . . . It is evidently the duty of every nation to take up arms against a disease which exacts such a terrible toll of death, suffering, and inefficiency. If this were done with energy and enthusiasm it is not too much to hope that in a few generations the tubercle bacillus would be practically brought under control, and with it many other malign influences."

TUBERCULOUS PENSIONERS.

Since the war the problem of tuberculosis among ex-service sailors and soldiers has been a perplexing and pathetic one. Dr. W. E. Elliot on August 7 in the House of Commons raised the question of the treatment of such men under the care of the Ministry of Pensions. He claimed that the tuberculous patient was in a peculiar position in

that he came to some extent under two Ministries—the Ministry of Health, or the Board of Health in Scotland, and the Ministry of Pensions. The ordinary pensioner was not convinced that when he came under the care of the Ministry of Health he had the same advantages that his fellows enjoyed who were under the sole care of the Ministry of Pensions. It did not seem possible to concentrate the tuberculous cases in one or two spots in the United Kingdom. Some had a grievance as to the disability grant; a pension of 100 per cent. was granted for six months after first dismissal from a sanatorium, but was not continued at that rate after subsequent admissions and dismissals from the sanatorium. A man was boarded solely on the extent of his disability. He did not know what the average length of life of the tuberculous pensioner was, but hoped it was longer than the average length of life of the tuberculous civilian patient. The latter was stated by the medical officer of health for Glasgow to have a duration of life of three years after first dismissal from the sanatorium. These pensioners were few in number, and it seemed might be dealt with as special cases. When he brought the matter to the attention of the Ministry of Pensions they said quite rightly it was impossible to mix up the duties of the Ministry of Pensions, which looked after the man in so far as he had been injured by the war, and the duties of the Ministry of Health, which looked after him in so far as he was a peril to the community. A close co-ordination between the two departments was needed. Dr. Elliot urged that the Ministry of Pensions had a special responsibility to make sure that these tuberculous ex-service men were so treated as to give the impression among the civil population that the tuberculous man should enter hospital for his own good—where he had the best possible chance of having the disease arrested and of making sure that it was not communicated to others. Mr. Muir (the Parliamentary Secretary to the Ministry of Pensions) in his reply acknowledged that Dr. Elliot had raised one of the most important questions the department had to consider. A man with a high disability from tuberculosis was debarred from entering into occupation because of the undesirability of his association with other workers. That was admitted, but the difficulty was to know what to do with him. It was necessary, if any assistance was to be given by way of curative treatment, that a patient's mind should be free from financial embarrassment, and also that he should feel he was a useful member of the community. It was important to know whether it was better to give a man full maintenance, which would make him independent of any need to earn a livelihood, or whether it would be better to give him the ordinary assessable pension on the same terms as for other disabilities and to try to provide him with useful occupation. The difficulties had been considered by the Ministry of Labour and the Ministry of Pensions in conjunction with the Ministry of Health, and schemes were proposed for setting up communities entirely for tuberculous ex-service men. The trouble was that most of these men were not desirous of entering such a community. On the other hand, a community such as that would probably have to be subsidized for a considerable time, and would have to enter into production of various kinds and into competition with purely economic units. The difficulty again presented itself of enabling men who entered these communities to feel that they were really useful, because

if their productive work was not carried on in the competitive sense, they felt that it was not on the same level as ordinary production. One or two schemes were running, but they were not too successful; one, he understood, was working now on economic lines and paying its own way, but that was the only one so far. A conference was arranged by the Minister of Pensions a month or two ago with the Ministry of Health and the Ministry of Labour to go into the question of the treatment of tuberculous ex-service men. It was agreed that no matter how much they might try, as the Ministry of Pensions, to help ex-service men, their case was bound up with the general question. The Ministry of Pensions, however, was responsible for the payment of pensions and allowances, and it had its inspectors to see that the men were properly attended to in institutions. At the beginning of the pensions scheme all tuberculous men were assessed and treated exactly as were those who were suffering from other disabilities, but later it became necessary to consider them as a class apart. There were among ex-service men 37,000 cases of tuberculosis due to or aggravated by war service, and five and three-quarter years after the end of hostilities such cases were being admitted for pensions at the rate of 190 per month. The annual expenditure of the Ministry of Pensions on tuberculous cases was between six and seven million sterling, and of that, only £300,000 went for administration and medical services. Most of the money went as hard cash to the pensioners themselves. In the case of men who got 100 per cent. disability after a course of treatment in the sanatorium it was true that the assessment was for six months. Contrasted with their ordinary assessment, it must seem strange that when they came out of the sanatorium in better health than when they entered it they should get the 100 per cent., and then at some other time revert to their ordinary pension, but it was done to relieve their minds from financial embarrassment. Following on the six months' rate their assessment came down no lower than 50 per cent. for a period of two years. He could promise that the matter of co-ordination was being kept in mind. The conference which was held recently raised certain points which were now under consideration. These official opinions are of interest and service, particularly when considered in relation to the problem of sanatorium treatment, industrial training, settlements, and after-care.

TUBERCULOSIS AND THE LONDON COUNTY COUNCIL.

Sir William Hamer in his recently issued Report for 1923 as Medical Officer of Health and School Medical Officer to the London County Council provides interesting data regarding tuberculosis in the London area. The estimated population in the middle of 1923 was: Civilian, 4,564,109, and non-civilian, 6,000. The deaths from tuberculosis of the respiratory system numbered 4,432, giving a death-rate of 0·97 per thousand. Deaths from other forms of tuberculosis numbered numbered 853. The number of notifications was 12,175; of these 9,791 were pulmonary and 2,384 other forms of tuberculosis. Under the Council's scheme for the treatment of tuberculosis there were available a total of 2,165 beds—1,441 under the Metropolitan Asylums

Board and 724 under voluntary institutions. For the institutional treatment of adult patients applications were received from 5,123 patients. Of these 762 (including 185 examined at the County Hall) were not accepted; 1,460 were examined at the County Hall, and their disposal there determined; 1,381 were referred to observation hospitals for observation as a preliminary step to their disposal; 1,637 were accepted for admission direct to institutions without previous observation or examination; and in 68 cases the applications for various reasons were not proceeded with. In 288 of the cases for residential treatment the patients for various reasons failed to enter observation hospitals or other institutions, and their applications were treated as withdrawn. In 145 other cases treatment was not commenced before the end of the year. During the year 1,741 patients were discharged from observation hospitals and 3,952 from other institutions. Inquiries into the after-histories of 2,987 cases confirmed the impression "as to the usefulness of the sanatorium in the treatment of tuberculosis in its initial stages and of its ineffectiveness when the disease is well established." An investigation of patients four to five years subsequent to their sanatorium treatment gave these results: 85 per cent. of the early cases and 39·9 per cent. of the moderately advanced cases were alive, and the remaining 15 per cent. of early cases and 60·1 per cent. of moderately advanced cases were dead. The group of far advanced cases showed a heavy death-rate, only 4·5 per cent. having survived. The question is asked, Is a mortality of some 70 per cent. within four years to be accepted as inevitable? and no hopeful answer is attempted. The outlook as regards tuberculosis in children is fortunately brighter. At the commencement of 1923 there were 655 beds available in hospitals and sanatoria for tuberculous children, of which 178 were in voluntary institutions and 477 in Metropolitan Asylum Board institutions. The number of cases under treatment at the end of the year was 707. The total number treated during the year was 1,404. In addition 218 children had the advantage of convalescence through the Invalid Children's Aid Association. Five open-air schools provided for 365 children notified under the Tuberculosis Regulations, 1912, as suffering from tuberculosis of the lungs or glands, but with no open wounds. The Report has a section on Open-Air Education, in which the work of the open-air schools and open-air classes is referred to, and notes are given regarding experiments in heliotherapy.

AFTER-HISTORIES OF SANATORIUM PATIENTS.

The Medical Research Council have recently issued a Study of the After-Histories of Tuberculous Cases treated at the Brompton Hospital and Frimley Sanatorium.[1] The Introduction provided by the authorities of the Medical Research Council, 15, York Buildings, Adelphi, W.C. 2, presents the following conclusions as being worthy of special notice: "(1) The results of sanatorium treatment at Brompton Hospital correspond very closely with the results already reported from

[1] "An Inquiry into the After-Histories of Patients treated at the Brompton Hospital Sanatorium at Frimley during the Years 1905-1914." By Sir Percival Horton-Smith Hartley, R. C. Wingfield, and J. M. R. Thompson. Pp. 50. With Diagrams and Tables. London: H.M. Stationery Office. 1924. Price 1s. 6d. net.

the King Edward VII. Sanatorium, Midhurst. They correspond, but not so closely, with those presented in Dr. Vallow's Report from Bradford. (2) The mortality of patients without tubercle bacilli in the sputum is less than that of patients with tubercle in the sputum. The curves of survival both among males and females of those in the former category approximate to those of the general population. The authors deduce that enduring arrest of the disease is to be expected from sanatorium treatment in many early cases of the kind admitted to Frimley. (3) Of cases with tubercle bacilli in the sputum, it is certain that the earlier the stage when the disease comes under sanatorium treatment the greater is the chance of survival. In Group I. (early cases) 79·3 of the male patients and 89·7 of the female survive five years, the corresponding number of survivors after ten years being 65·5 per cent. and 85·2 per cent. respectively." The inquiry is based on an investigation of 2,393 men and 1,007 women. For such an inquiry to be of much value in ascertaining the effect of sanatorium treatment the authors realize that it is desirable that there should be "a comparison of the mortality of patients treated at a sanatorium with that of a body of lives suffering from tuberculosis, similarly constituted both as regards age and severity of disease, but treated according to methods other than those at present in vogue at a sanatorium." This would not seem to be possible. It would be easy to submit the results of this inquiry to much criticism, but as far as the data goes and the deductions thereon the research must be considered as tending to substantiate the opinions already reached as regards the value, limitations, and disappointments of so-called sanatorium management.

NOTES AND RECORDS.

A Joint Tuberculosis Committee has recently been formed, with Dr. Ernest Ward, of Torquay Road, Paignton, Devon, as Hon. Secretary. This body has been formed to consider the following subjects: (1) Co-ordination of Statistics and Annual Reports, (2) Collective Research, (3), Post-Graduate Study, and (4) Employment of Tuberculous Persons. The committee is composed as follows: Tuberculosis Group Society Medical Officers of Health, and Allied Societies: Drs. Peyton, Neville Cox, Lissant Cox, and E. Ward; (i.) Wales: Prof. Lyle Cummins; (ii.) Medical Officers of Health: Prof. Kenwood; Tuberculosis Society and Allied Societies: Drs. Jane Walker, H. A. Ellis, William Brand, and F. J. Blackmore; Society of Medical Superintendents of Tuberculosis Institutions: Drs. James Watt, S. Vere Pearson, F. Rufenacht Walters, and Peter Edwards; Ministry of Pensions Representative: Dr. A. Sandison; Observer for Ministry of Health: Dr. A. S. MacNalty; National Association for Prevention of Tuberculosis: Drs. F. N. K. Menzies and J. J. Perkins; North-Western Tuberculosis Society: Drs. George Jessel and D. P. Sutherland; Brompton Hospital: Dr. L. S. T. Burrell; Victoria Park Hospital: Dr. Roodhouse Gloyne; Surgical Tuberculosis: Sir Henry Gauvain. The committee are, first of all, to undertake the collection of information and the issue of instruction concerning *Collective Research*. They hope (1) to secure co-ordination among those researching on the same subject; and (2) to make suggestions to those who have not yet undertaken

research. A circular has recently been issued to medical advisers engaged in tuberculosis work presenting these questions: (1) If you are engaged on research work, and, if so, on what subjects? (2) If not so engaged, would you care to undertake such work? (3) What subjects would you suggest as most suitable for research in tuberculosis? A statement is made indicating that the Medical Research Council have given their approval and support to this enterprise, which, we trust, will meet with much success.

The Joint Tuberculosis Committee, of which the Hon. Secretary is Dr. Ernest Ward, Torquay Road, Paignton, Devon, are arranging for post-graduate study for tuberculosis workers. Intensive courses of one week's duration are contemplated, but other arrangements can be made. The following course will be available if there is sufficient demand: I.—Surgical Tuberculosis. (1) Oxford, under Mr. G. R. Girdlestone, with residence at Queen's College. (2) Leasowe, Cheshire (Liverpool Children's Hospital), under Dr. Martin. No fee. (3) Carshalton, Surrey, under Dr. Pugh (subject to the approval of the Metropolitan Asylums Board). (4) Alton, Sir Henry Gauvain will take one or more clinical assistants without fee. II.—Other Forms of Tuberculosis. (5) Brompton Hospital, London. (6) City of London Hospital, Victoria Park. October 13-18. Pneumothorax; Surgery of the Chest; Pathology. Fee, 2 guineas. (7) Manchester and Lancashire, under Dr. Sutherland and Dr. Lissant Cox: Pneumothorax; Methods of Administration; Diagnosis; Sanatorium and Training Colony Work, etc. (8) East Anglian Sanatorium, Colchester, under Dr. Jane Walker: Sanatorium Work; X Rays and Pneumothorax; Tuberculosis in Children; Employment of ex-Patients. (9) Colindale Sanatorium, Hendon, under Dr. Marcus Paterson. No fee. (10) Welsh University, under Professor Lyle Cummins: Co-ordination between Pathological Appearances and Physical Signs; Epidemiology; Industrial Tuberculosis; Hospital and Sanatorium Administration. Fee, 1 guinea. (11) Edinburgh, under Sir Robert Philip: General Instruction in Tuberculosis. (12) Glasgow, under Dr. Crocket: X Rays and Pneumothorax; Laryngeal Tuberculosis; Tuberculin in Diagnosis and Treatment; Sanatorium Methods. (13) Dundee, under Professor Tulloch and Dr. Munro: Bacteriology; Sanatorium Methods, etc. (14) London Course, under the Ministry of Health, it is anticipated may be possible (negotiations proceeding). (15) League of Nations Tuberculosis Course. It is hoped that arrangements will be arrived at whereby some British tuberculosis workers may share in that part of the course which is held in this country. Tuberculosis officers and other medical advisers specially interested in tuberculosis are invited to communicate with Dr. Ward at once regarding any course they would like to attend. Names will be sent to those responsible for the conduct of the course, who will then communicate directly with the applicants.

At the City of London Hospital for Diseases of Heart and Lungs, Victoria Park, a short, intensive, post-graduate course will be held from Monday, October 13, to Friday, October 17, on the following subjects: Artificial Pneumothorax (Dr. Clive Riviere); Mediastinal Tumours, Pleural Effusions, and Empyemata (Dr. F. G. Chandler); General Anæsthesia and the Significance of Cyanosis in Pulmonary Disease (Dr. A. Goodman Levy); Demonstration of Ward Cases (Dr.

E. H. Colbeck); Demonstration of Electrocardiograph (Dr. A. J. Scott Pinchin); Laboratory Demonstrations in the General Pathology of Tuberculosis (Sir Percy Bassett-Smith); the Pathology of Pneumothorax and Complement Fixation in Tuberculosis (Dr. S. R. Gloyne); and Operations in Chest Diseases (Mr. W. H. C. Romanis). The fee for the course will be two guineas; particulars from the Dean of the hospital.

The Harben Lectures of the Royal Institute of Public Health, 37, Russell Square, W.C. 1, will be delivered by Professor E. L. Collis, M.A., M.D., Talbot Professor of Preventive Medicine, University of Wales, on November 24, 25, and 27, at 4.30 p.m. The subject will be "Phthisis and Industrialism (National and Occupational) with Reference to Other Infectious Diseases."

The following are the regulations for the Tuberculous Diseases Diploma, University of Wales (T.D.D., Wales): 1. Candidates for the Tuberculous Diseases Diploma (T.D.D.) must possess a medical qualification registrable for practice in Great Britain and Ireland, be not less than twenty-five years of age, and either *Category A*, have held, for a period of not less than five years, whole-time appointments for work on tuberculosis, and presented a certificate or certificates in support of the fact that the candidate has worked for five years in whole-time tuberculosis appointments, signed by the representative of the authorities for whom the work was performed or by the administrative medical officer concerned; or *Category B*, have held a registrable qualification to practise for at least one year, and presented the following certificates: (*a*) A certificate of satisfactory pursuance of a course of consecutive post-graduate study of the clinical and epidemiological aspects of tuberculosis of six months' duration at a recognized university, medical school, or hospital where such a course is given; *or*, alternately, a certificate of one year's post-graduate work as a whole-time member of the staff of a recognized tuberculosis hospital, sanatorium, or dispensary approved by the Ministry of Health, signed by the representative of the authorities for whom the work was performed or by the administrative medical officer concerned. (*b*) A certificate of satisfactory pursuance of a course of consecutive post-graduate practical study of the pathology and bacteriology of tuberculosis of three months' duration at a tuberculosis laboratory or a recognized general laboratory where such a course is given. (*c*) A certificate of three months' satisfactory attendance at a tuberculosis institute or dispensary recognized by the Ministry of Health. The courses certified as above may be taken concurrently. 2. The diploma will be granted to such candidates as pass an examination divided into two parts as follows: *Part I.*—(*a*) A written examination on the clinical and epidemiological problems of tuberculosis. (*b*) Oral and practical work, including the examination of patients, the recording of the physical signs found to be present, the recognition of pathological specimens, and a *viva voce* examination. *Part II.*—A written and practical examination on the pathology and bacteriology of tuberculosis. But in the case of candidates of Category A, Part II. may be remitted on the submission and acceptance either of a thesis setting forth the results of clinical or epidemiological investigation carried out by the candidate in connection with tuberculosis, or of reprints or copies of not less than two original articles on tuberculosis published by the candidate in the medical press. 3. An examination in each part will be held annually in the first week of July in each year. Notice of candidature, together with the entrance fee of £10 10s. and the necessary certificates, must be forwarded to the Registrar of the University, University Registry, Cathays Park, Cardiff, not later than the 15th day of May.

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